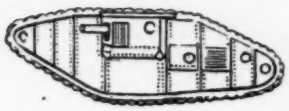
ARMORED CAVALRY JOURNAL



GENERAL HEADQUARTERS
SUPREME COMMANDER FOR THE ALLIED POWERS
OFFICE OF THE SUPREME COMMANDER

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From Tokyo I send the Armored Cavalry Journal my warm congratulations upon its fulfillment of sixty years of distinguished service in keeping the military profession abreast of the advance of the cavalry arm in the art of war. During these decades no other branch has experienced greater change in weapons, in technique, and in tactical requirement. Discarding the horse and the saber to keep pace with the increasing tempo and violence of modern war, the cavalryman speedily adjusted himself to armored mechanization and commensurate fire power, firmly to hold his historic role of the far-flung and rapid movement echelon. In this he demonstrated with striking clarity that the invincible esprit which has characterized his past yet carries him to the vanguard of every advance, an irresistible force toward victory.

Douglas MacArthur

DOUGLAS MacARTHUR.

MARCH-APRIL, 1948

1888 - SIXTIETH ANNIVERSARY - 1948

VOLUME I., NO. I.

by Captain William Gardner Bell

Associate Editor, Armored Cavalry Journal

THE Custer incident on the Little Big Horn was a dozen years in the past. Not a full two years before, elements of the Fourth Cavalry had rounded up Nachez and Geronimo, troublesome Apache Chieftains. Across the land settlement was going forward apace, and the United States Army was active in guarding and operating stage lines, safeguarding the settlers, controlling the Indians on reservations, restricting the depredations of desperadoes and influencing calm in labor troubles. Bracketing years would log incidents in Frontier history involving the Crows, Piegans, Sioux and Bannocks, spotlighting the Department of the Dakota and twilighting Indian disturbances. Through the impetus of the Service School at Fort Leavenworth, a desire was springing up for more specialized and professional learning in the various branches of the Army. Members of the Cavalry Association decided to publish a Journal. Thus The Cavalry Journal came into being: thus the year 1888 passed into history.

With the formation of the United States Cavalry Association in 1885, Article Ten of the Constitution had paved the way for a Journal. The Association had as its design the professional improvement and the advancement of the cavalry service generally. To serve this aim, members read and discussed papers on a variety of subjects at meetings. The printed record of those papers and discussions formed the basis for the first Cavalry Journal.

Volume One, Number One came off the steam presses of Kecheson and Reeves at Leavenworth, Kansas, in March of 1888. It was received with generous press comment from many sources, including, among others, *The Epoch, The Nation, Army and Navy Journal, The Guardsman, U. S. Naval Institute Proceedings,* England's *Journal of the Royal Service Institute,* and France's *Revue de Cavalerie.*

Due to the widely dispersed membership of the Cavalry Association, and the conditions of the period, the Central Headquarters at Fort Leavenworth was supplemented by Branches of the Association. In 1888, upon publication of the first Journal, branches were located at West Point, New York, and at Fort Reno, Indian Territory. Each of these was presided over by a Vice President and Secretary. Proceedings of Association meetings reached these branches in Journal form.

First President of the Cavalry Association upon its formation in November of 1885 had been Colonel Abraham K. Arnold. The first President to appear on the masthead of the Journal was General Wesley Mer-

Sixty years ago the Armored Cavalry Journal began publication. Its life as a Service Journal has been a full and useful one. As the organ of the Armored Cavalry Association it carries on the original design–the professional development and general advancement of the Service.

ritt, whose name was to remain there during the nearly twenty years of his election to the post. The group of Honorary Members for that period was an imposing one: General William Tecumseh Sherman, General Lew Wallace, General Phillip St. George Cooke, General William S. Harney, Governor Fitzhugh Lee and the Honorable Joseph Wheeler and J. C. Ropes of Congress.

The first issue of the CAVALRY JOURNAL carried a diversity of contents. Several of the subjects were of a highly controversial nature and were not resolved until many years later. The items embraced some German Ideas on Cavalry, Remounts, The New FA Gun, The Use of Arms Mounted, Sabers or Revolvers, The Kelton Devices, Marching Cavalry, Mounted Fire Action of Cavalry, Dismounted Service of Cavalry and, finally, The French Cavalry.

In the latter pages of that first issue there appeared the Constitution and By-Laws of the Association, backed by the roster of Officers of the Association and a list of members. To round out the magazine the closing pages contained a selection of military works available to members through the Association, a service continued down through the years.

Early issues of the new publication were the work of a Committee on Publication and Correspondence composed of three officers. There was no Editor, as such. No schedule of publication was planned. Rather, the JOURNAL was to be published when sufficient material had been gathered to build one issue. However, one year after the start of publication a quarterly basis was established. This was to change periodically, for various reasons, through the years to come.

There were several difficult periods in the JOURNAL's life. Perhaps the greatest pinch came when all officers connected with publication were called to the front during the war with Spain. In this period only one issue was published for the years 1898 and 1899 respectively. From 1899 the lapse extended to 1902, during which period the continuation of the JOURNAL was in great doubt, and there was a proposal to abandon publication. A letter from General Merritt, written at sea aboard the Steamer *Friedrich Der Grosse,* plus the efforts of some Association members, instilled the necessary life for the resumption of publication in July of 1902.

First credit for Editorial work is granted to Captain Otto L. Hein, Secretary-Treasurer of the Association, in the form of a motion of thanks at a meeting. The first designated Editor appears to have been Major (later General) Camillo C. C. Carr. Although the title is not indicated in the issues of the period, Major Carr made it a point to go through several copies, carefully appending his name to indicate credit due.

As the completion of a decade of publication approached the CAVALRY JOURNAL broadened its policy to include advertising. In June of 1897 there appeared at the back of the issue several pages assembled into the JOURNAL Shopping and Business Directory. To subscribers went this blurb: "The firms represented in the following pages are recommended to your consideration. Only houses known to the management of the JOURNAL to be reliable ones are accepted. (Footnote 1948: Ah! What blissful days!) Appropriately enough the leading advertiser was a Military Outfitter in Columbus, Ohio.

Also represented in that section was a full page spread laid in delightful frills, woven about the intelligence of a drink called Braunschweiger Mumme, a concoction sounding suspiciously like a beverage of Hitler Associates. Further reading discloses a nutrient tonic, liquid malt extract, palatable and nourishing, a creator of appetite, an aid to digestion and recommended by physicians.

Next in line came a Home Treatment for Liquor, Morphine and Tobacco Habits–the 30-day treatment.

Several familiar names were scattered throughout this advertising section, among them Schlitz and Brentano. All of which indicates what a nice cooperative spirit existed in the early years. The pinch was on in the thirties when the lawmakers put the axe to the carrying of advertising by service journals with duty personnel on the staffs. Today we sit by, weaving dreams of the out-of-the-world service journal we could supply to our readers and our branch with the revenue from advertising. As things stand we dare not approach

a plug for Government Farm stud service, much less the bald copy of an ad in the year 1897 in this very JOURNAL, quote: "The Best Brand of Whiskey and the Finest Wines in use at the Fort Leavenworth Officers' Club are supplied by the Brotherhood Wine Company." Unquote!

There was perhaps a bit more refinement and a little more rank in the ad of the States distributor for Moet and Chandon Champagne back in 1902, from a position on the inside front cover of the JOURNAL. Leading the list of the heads of four governments who dished out this product exclusively at lavish affairs of state was the statement that "at the White House in Washington at the banquet to H R H Prince Henry of Prussia, the President of the United States served ONLY this champagne!"

The cover of the CAVALRY JOURNAL during its first several years of publication was quite plain, containing the table of contents sided by a simple sketch of guidon, bugle and saber. At the turn of the century this gave way to a somewhat stiff drawing of a mounted cavalryman. Following the difficult Spanish War period, the JOURNAL was to undergo a real face lifting through the kindness of artist Frederic Remington, a life member of the Association.

In 1898 Remington had gone to the camp of the Third Cavalry at Tampa, Florida, to visit a friend, Captain F. H. Hardie, then commanding Troop G of the Third. While there he saw and was struck with the appearance of one of Captain Hardie's men, Sergeant Jack Lannen. Visualizing him as a perfect type of American Cavalryman, Remington made several sketches of him in front of Hardie's tent, and these along with several photos inspired a finished drawing which was presented to the CAVALRY JOURNAL in 1902. In January of 1903 this sketch appeared on the cover of the JOURNAL, where it was to remain for almost forty years. Sergeant Lannen sailed with the Third for Santiago shortly after posing where he died of yellow fever, ending a thirty-three-year army career. Of three spellings of the name, the above is used as being correct, having been provided from the records of Troop G in 1911.

Somewhere back through the years the sketch acquired the title "Old Bill," and so our cavalryman is known today. For the cavalry Old Bill has become a symbol. It was with a certain regret that in 1942 Old Bill rode off the cover of the JOURNAL, prodded by the spurs of progress. Today he sits his mount on the back cover, a firm support to the strong tradition of a proud service.

It's interesting to trace the names of Army families in the JOURNAL through the years. Prominent during sixty years of publication are such names as Henry, Holbrook, Chaffee and Howze, to note only a few familiar in cavalry and Army circles. The career of many of our top Army figures may be followed in a progressive reading of the CAVALRY JOURNAL through its sixty years of publication. Year by year the writings of such prolific authors as Malin Craig, James Harbord, George Patton and Lucien Truscott appear under junior and through progressively higher grades. Over all, many top Army men contributed to the pages of the JOURNAL. The year 1931 alone brings to light articles by such familiar persons as John Pershing, Dwight Eisenhower, George Van Horn Mosely, Herman Beukema, Johnson Hagood, Hamilton Hawkins, Guy Henry, Walter Short, C. P. Summerall and a variety of others perhaps less well known. There has been a good sprinkling of material from outstanding foreign military leaders. Editorship of the JOURNAL has been capable.

Rotation of the Editorship has been frequent in the life of the JOURNAL, the result of the exigencies of the military. Today is no different. There has recently been a change in Associate Editorship. Another change will come shortly with the retirement in August of the present Editor, Colonel Edwin M. Sumner. At this writing his successor has not been designated.

Changes in format, several of which have been mentioned, have occurred periodically in the existence of the CAVALRY JOURNAL. Highlights touched the years 1903, 1920, 1931, 1942 and 1946. In 1942 Old Bill left the cover to be replaced by a photograph. This first photo was a late training shot of the Philippine Scouts. The forerunner of things to come was the Fall of '42 shot showing a view from inside a General Grant tank of armor in action on the Libyan Desert.

Old Bill missed out on several issues, but in 1943 he took his post on the back cover while the front set the pace with pictures of tanks and George Patton.

The war brought with it the final transition from horse to mechanization, and the CAVALRY JOURNAL kept pace. Articles and pictures depicted armored action. Cavalrymen underwent the transition to mechanization and armor. A traditional arm evolved a new method to acquit a traditional mission. In July of 1946 the Cavalry Association held a special Executive Session in the Editorial Office of the JOURNAL. Resolved, that the Cavalry Association shall become the Armored Cavalry Association, and the JOURNAL shall become The ARMORED CAVALRY JOURNAL. It was a forward-looking step. A letter from General Devers centered the new makeup of the ARMORED CAVALRY JOURNAL'S cover.

How unfortunate that Frederic Remington could not have lived to see the transition of the service which his talent and high interest glorified in pen and brush. Had he been alive today there is small doubt that this article, so enriched by a lead sketch reproduction of his famous *Pony Tracks In The Buffalo Trails,* might have been brought to a close with perhaps a sketch titled *Tank Tracks on the Bogey Wheels,* in which Old Bill, his torso projecting from the turret of a Mark 3000 monster, is seen floating to earth in an airborne-armored invasion. Who can imagine the report of publication on the 120th Anniversary of The ARMORED CAVALRY JOURNAL?

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON

13 January 1948

Dear Colonel Sumner:

Throughout its sixty years of publication, The Armored Cavalry Journal has been a professional aid of ever increasing value to the cavalryman and later to his armored successor. Its well-written, informative pages have been indispensable to the expert who wishes to maintain his standing in his profession.

I am grateful for this opportunity to extend to you and your editorial staff my greetings on this 60th Anniversary and best wishes for many more years of service.

Sincerely,

Omar N. Bradley
OMAR N. BRADLEY
General, U. S. Army

Colonel Edwin M.Sumner
Secretary-Treasurer-Editor
The Armored Cavalry Journal
1719 K Street, N.W.
Washington 6, D.C.

HEADQUARTERS
ARMY GROUND FORCES
OFFICE OF THE COMMANDING GENERAL
FORT MONROE, VIRGINIA

1 March 1948

Colonel Edwin M. Sumner
Editor
THE ARMORED-CAVALRY JOURNAL
1719 K Street, N.W.
Washington, D. C.

Dear Colonel Sumner:

I take this means of extending to The Armored-Cavalry Journal my congratulations on the occasion of the 60th anniversary of its founding.

The Armored-Cavalry Journal has every reason to be justly proud of its record of sixty years of consistently superior achievement in service to the branch it represents, and to the Army as a whole.

For over six decades The Journal has been almost indispensable to the cavalryman and, later, the armored cavalryman, who has sought to be a well-informed specialist in his chosen branch. Frederic Remington's etching "The Cavalryman" which featured the publication's cover for so many years, became the colorful symbol and the trademark of the Cavalry Arm.

The Journal has done much for the cavalryman. Through its well-written pages he has been able to trace the development of weapons, tactics and strategy. He has compared what he has learned with the findings of cavalryman in other countries, through articles, reprints and translations. He has acquired incidental knowledge of related subjects, such as the origins of polo and other mounted sports. Through the professional articles and notes he has been able to materially increase his own knowledge of his specialty. More than this, he has found interesting historical articles for reading during his leisure time.

The inclusion of material on other arms and branches, and the change to The Armored-Cavalry Journal in 1946, prove that the publication intends to continue to improve itself, and to keep abreast of the changing times.

I am happy to congratulate The Armored-Cavalry Journal as it reaches this new milestone, as a symbol of the esprit of our Armored Cavalry.

Sincerely yours,

Jacob L. Devers
JACOB L. DEVERS
General, USA
Commanding

HEADQUARTERS THE ARMORED CENTER
Office of the Commanding General
Fort Knox, Kentucky

19 January 1948

The Editor
The Armored Cavalry Journal
1719 K Street, N. W.
Washington 6, D. C.

Dear Sir:

I am happy to join your host of friends in paying tribute to The Armored Cavalry Journal upon the occasion of its 60th anniversary of service to the Army of the United States.

The Cavalry Journal covered the era of horse cavalry with a distinction that will live in the annals of military journalism and in the memories of those who served in the mounted branch.

The Armored Cavalry Journal has the confidence of the Army that it will influence modern military thought so that Armor, inheriting the traditional tactical roles of cavalry, will maintain its place in the future development of our national security.

Sincerely,

John W. Leonard
JOHN W. LEONARD
Major General, U. S. Army

HEADQUARTERS 1ST CAVALRY DIVISION
OFFICE OF THE COMMANDING GENERAL
A.P.O. 201

Camp Drake TOKYO, JAPAN
30 December 1947

Colonel Edwin M. Sumner
Editor, U. S. armored Cavalry Journal
1719 K Street, N.W.
Washington 6, D.C.

Dear Colonel Sumner:

The 1st Cavalry Division sends it heartiest congratulations to the ARMORED CAVALRY JOURNAL on the occasion of its 60th anniversary. You have always done an outstanding job in keeping Cavalry officers up to date on the tactics and technique of their profession. You have given us many fine historical examples. You have given us outstanding examples of combat leadership. All of these paid off during the war which has just been completed.

The 1st Cavalry Division in Tokyo wishes you the best of luck and continued success in the future.

Very sincerely,

W. C. Chase
WILLIAM C CHASE
Major General, U S Army
Commanding

EDITORIAL

1889-1944

THE PAST THE PRESENT AND THE FUTURE

The Big Picture

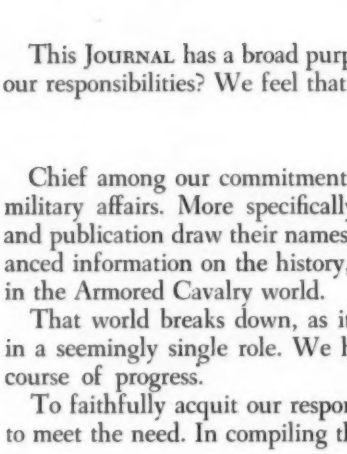
This Journal has a broad purpose. It has a scope that implies a wide responsibility. Do we recognize and meet our responsibilities? We feel that we do!

Armored Cavalry

Chief among our commitments is the supplying to our readers of an active medium for the discussion of military affairs. More specifically, our attention is directed upon the special field from which our Association and publication draw their names—Armored Cavalry. We aim at an organ that supplies our members with balanced information on the history, achievement, opinion, technical advancement, personalities and what have you in the Armored Cavalry world.

That world breaks down, as it were, into two hemispheres, thereby shouldering us with a dual responsibility in a seemingly single role. We have two entities fused into one; a natural blend resulting from the normal course of progress.

To faithfully acquit our responsibilities we put into the pages of the Journal a balance of material designed to meet the need. In compiling that material the need demands that the emphasis be placed upon armor and mechanized cavalry, the modern tools that serve our traditional cavalry mission. However, in pacing the trend we would be in default if we did not consider the rich history, tradition, accomplishment and continuing value of the horse and horse cavalrymen to our Armed Forces. With this in mind we continue to offer a general fare in our pages.



Other Branches

The section of the Journal devoted to Other Branches is our answer to the basic obligation of supplying adequate intelligence on all components of the forces team. Understanding must be all-embracing, and not limited to a single branch.

Backing up our description of the respective branches by their Chiefs is our regular coverage of all of the arms and services. We reach out to unlimited boundaries, with a variety of material on Air Corps, Navy, Marines, National Guard, Organized Reserve, Guided Missiles, the Atomic Bomb, Research and Development. But we do not stop here.

The Industrial Side

One side of any picture is the halfway mark only. What of the other half?

Our national security has assumed a new complexion to us as the result of the recent war. That war caught us in a critical state of unpreparedness. Only the delaying action of our allies on the fighting front gave us the respite necessary to marshal our armed strength and to activate our production potential in support of full operation against our enemies.

Advancement in the field of research proportionately nullifies the slight advantage this country possessed in the form of its buffer of distance against enemy attack on home shores. Matured by the impact of our recent experience, and cognizant of the demands of the future, our country has in imple-

RIALS

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THE FUTURE

mentation a program of preparedness which recognizes the relation of industry to readiness. This places industry on the same team with the military as a factor of security. In the strong belief that the right hand should know what the left hand is doing, the ARMORED CAVALRY JOURNAL feels called upon to keep you posted on industrial developments. Members of the Armed Forces should make it a duty to acquire a knowledge of industry's role in our security planning parallel to their knowledge of the services. To aid you in becoming conversant with the aims and the program of industry in its part in our Government's coordinated defense plan, the ARMORED CAVALRY JOURNAL will offer from time to time selected articles by qualified writers, designed to give you the full picture.

WORLD RESPONSIBILITIES

The American Soldier is serving on many scattered fronts throughout the world. In garrisoning our outposts of democracy he is one of the more potent instruments of our foreign policy. Our soldier is carrying out his duties under the eyes of many peoples speaking a variety of languages and inhabiting widely scattered sections of the universe. His service brings him into direct contact with the soldier of many other nations. His presence and his actions are translated inevitably into the expression of his country. As an instrument of foreign policy the American soldier is the representative of the ideology of his country, its government and its people. He comes into contact with opposing ideologies. His ability to meet differences properly and to react properly depends upon his understanding of what he is up against and his instruction as to the appropriate reaction.

Prior to the late war Americans generally were somewhat undeveloped along lines of international consciousness. Today we have hundreds of thousands of past or present members of our Armed Forces whose vision and interest have been broadened by service outside of our country. We have seen and analyzed things, and we are better equipped to meet our present-day world responsibilities.

Knowledge of foreign affairs is essential to competent soldiering and good citizenship. To promote that knowledge the JOURNAL will attempt to bring its readers some of the objective material covering world politics.

INTERNATIONAL RANGE

Finally, the ARMORED CAVALRY JOURNAL is a publication of international scope and flavor. We go far afield in our search for the ingredients to compound a technical, useful magazine. Within our pages have appeared articles on foreign armies, tactics and equipment; within our pages have appeared many articles by foreign writers. International circulation, international quotation and international recognition are the measure of our product.

THE FUTURE

Our desire is to continue the publication of a JOURNAL that has scope, vision and appeal; one that satisfies the likes and requirements of our readers. General comment reaching the Editorial Office indicates an increasing fulfillment of that wish. This Sixtieth Anniversary Edition of the ARMORED CAVALRY JOURNAL seems to provide an appropriate opportunity for us to reaffirm our intentions by dedicating our future to continued service to our readers to the very peak of our abilities.

WE FOUGHT AT KASSERINE

The Fifth Anniversary of the Battle of Kasserine Pass has been marked by important releases from several top Allied sources. The sum of the retrospect is none too favorable to our High Command in the Tunisian Campaign. Here is an on-the-spot report of a Battalion Commander in the Kasserine Operation.

SUCH headlines as "U. S. Tanks Fling Back Picked Fighters," "Angry Yanks Rout Rommel" and "American Troops Take Kasserine" filled the home papers during the latter part of February in 1943. As a result of these stories, the public generally came to regard the Battle of Kasserine as a great American victory. The popular conception of the battle seems to run something like this: Our troops, because of their greenness and inexperience, first took a severe licking when they were attacked by the battlewise Afrika Korps. However, having been transformed within a few days into seasoned veterans, they turned on the enemy, brought Rommel's legions to a surprised halt, assumed the offensive and chased his demoralized forces back into the desert.

Because of this rather widespread understanding of the Kasserine operation, another February headline, just five years later, has caused some lifting of eyebrows. This time they were not in such big print. They read "Rout of Rommel at Kasserine Pass Denied In Reports By Alexander—British Field Marshal Declares Germans Withdrew Methodically After Having Put U. S. Forces in a Grave Position."

The story, which appeared under a London dateline, went on to say that Marshal Alexander in his dispatches on the Tunisian campaign which had just been published had demolished the legend of the furious Allied counterattacks at Kasserine. It was reported that he had written that the decisive engagement in which the Germans had been halted in their attempt to turn the Allies' right flank had been fought by a British armored brigade group, a British infantry battalion and two field artillery battalions of the United States Ninth Division.

Marshal Alexander said that the battle ended when Rommel appreciated his "casualties were increasing at a disproportionate rate and that the opportunity for further exploitation had passed."

The writer took part in the fighting around Kasserine, which was publicized as an American victory. However, I have no intention of challenging the correctness of Field Marshal Alexander's conclusions. In the first place, it would be presumptuous since my position during that operation was that of a battalion commander. Secondly, there is no reason for me to try to get into an argument for the simple reason that, for the most part, I agree with him.

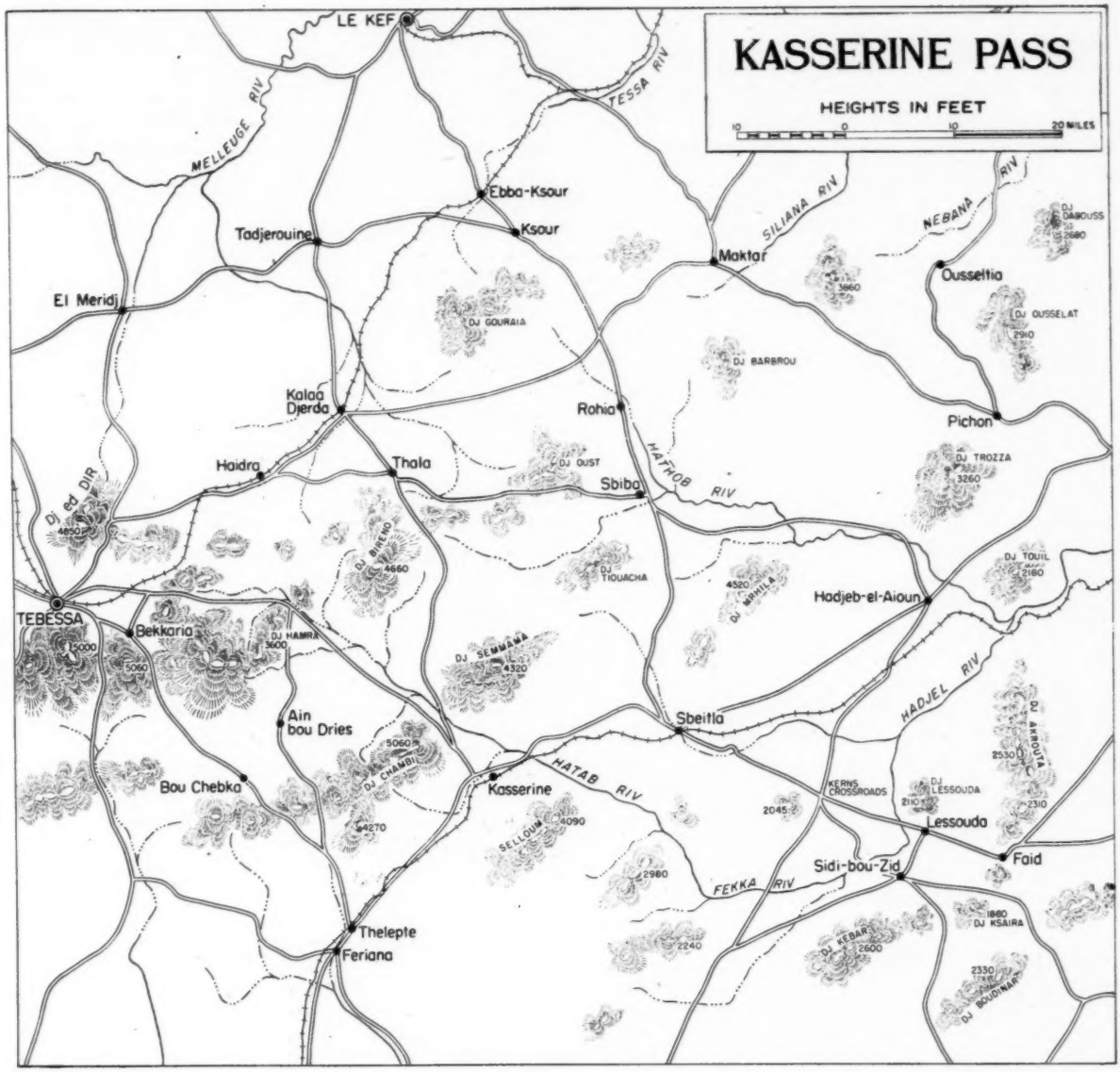
I have never felt that the credit for the success in halting the German offensive at Kasserine has been properly shared. The main force of that attack, once the Pass was captured, was launched in the direction of Thala, with the apparent plan of heading from there for Le Kef and thereby getting around behind elements of the British First Army. That attack was stopped by the British, assisted by a small American force. The attack in the direction of Tebessa, which an all American command defeated, was not the enemy's principal effort.

In my opinion, what really caused the Germans to pull back through the Pass, once they found their way blocked, was not the pressure we put on them but the realization that the Eighth Army was about to resume its drive and the holding of Kasserine was of no particular value to them. They had accomplished their mission by throwing us off balance in our attempt to drive through to the coast and had prolonged the eventual showdown in Tunisia by several months.

However, the fact that the Germans withdrew and were not driven back through the Pass in no way discredits the fight that we put up. American forces slowed Rommel's advance across the country leading to the Pass and stopped one prong of his offensive after he broke through. Our successes at that point were probably no more exaggerated in the news than were those of other American troops during the war when such accounts followed stories telling of their reverses.

What follows is largely a story of my experiences as a tank battalion commander in the fighting around Kasserine. Much of what I saw was observed from the limited view that one can get from the turret of a tank

by Colonel Henry E. Gardiner



when the enemy fire keeps you pretty well submerged. As a consequence, I cannot write authoritatively on the big picture of that operation. I do have some opinions though on the conduct of the command in higher levels and have included some comments and criticisms of certain actions. Whether these are justified or not may be open to question, but it's the way I felt knowing what I did then and nothing has developed in the few years that have passed since that time to change my mind.

The Battle of Kasserine was not one isolated action. It was really a series of engagements involving the fighting in front of the Pass, an action in the Pass proper and two battles between different sets of antagonists which occurred a number of miles out in the Valley above the Pass.

A little background information will perhaps be helpful in giving a better understanding of the events that led up to Kasserine. This should also put the reader in position to judge whether the troops that participated in that operation were green and inexperienced and give some idea of the equipment we had to fight with.

There was only one American armored division which took part in the Tunisian campaign and that was the 1st. Elements of the 1st Armored Division, under Combat Command "B," constituted part of the task force which captured Oran at the time of the Allied landings in Africa. The Division was organized then

as it was throughout the African campaign on the old basis of a reconnaissance battalion, one infantry regiment, two armored regiments and three artillery battalions. While the casualties among the tankers were slight in the two days' operations against the French, one armored infantry battalion of the 6th Infantry took exceptionally severe punishment, suffering over three hundred and fifty casualties of which more than two hundred were killed.

The one medium tank battalion which participated in the initial landings at Oran was the Second Battalion of the 13th Armored Regiment. It was this battalion that I commanded throughout most of the Tunisian campaign. A medium battalion in the old setup consisted of a headquarters company and three tank companies of seventeen tanks each. That meant, counting the headquarters tanks, a maximum strength of fifty-four tanks to the battalion. The headquarters company had a platoon of 81mm mortars and a platoon of 75mm howitzers mounted on half-tracks that were termed assault guns. The reconnaissance platoon consisted of two half-tracks and a quartet of peeps.

The Second Battalion was equipped when it landed in Africa with the M-3, or as it was popularly known, the General Grant tank. While the M-4's or General Shermans were being supplied to the armored divisions at home, we never had a full complement of them until after the fighting in Africa had ended. The M-3 was a much inferior tank. It had a limited traverse on its 75mm gun, which meant that the tank could only fire in the direction in which it was headed. Moreover, the gun was set so low that almost the whole tank had to be exposed before it could be brought to bear on a target. There was no slope to the side armor and the .30 caliber gun in the cupola, which was for defense against aircraft, was worse than useless.

From Oran, the Second Battalion was rushed up into Tunisia. There we came under the command of the British First Army and joined its forces in the drive on Tunis. We were within eleven miles of our objective before the mounting German resistance brought us to a stop. A period of confused and bitter fighting followed during which we were joined by the rest of CCB. When the battalion was pulled out of the line on December 10, it only had twelve tanks left, the other forty-two having been lost in actions around Djedeida and Tebourba.

The High Command still had hopes of capturing Tunis before winter set in and we were hurriedly re-equipped and filled up with replacements. It was then that we received our first M-4's but only enough for about half of the battalion. As soon as we had a full complement of men and tanks, we were moved with CCB into a concealed bivouac, near a little community called Teboursouk. This placed us closer to Medjez El Bab which had now become our front line.

The day before Christmas I was directed to report to CCB's rear echelon, which was some thirty miles back down over a tortuous mountain road. It had been alternately raining and snowing for several days and the dirt road had been churned up by a heavy military traffic into a series of quagmires. On my arrival, I found that the unit commanders of CCB were assembling for a meeting, the nature of which was unknown. We hardly had gotten the mud out of our eyes when we were assembled in a cow shed which was the largest gathering place available. There Major General Lunsford E. Oliver, the CCB Commander, introduced us to General Eisenhower and General Anderson, the Commander of the British First Army. General Eisenhower spoke briefly. He said that the drive on Tunis, the plans for which had been unknown to us, had been called off. The reason was that the heavy rains, which were expected to continue, had made the movement of vehicles off the roads impossible. The rest of his remarks were to the effect that it was up to us unit commanders to see that our troops' morale was maintained at a high level during the period of their inaction. I can't say that the round trip over that road improved mine any.

On the night of 2 January 1943, I was called up to CCB and informed by the S-3, Lt. Col. E. A. Russell, that we were moving south to the vicinity of Tebessa. An American force was being assembled there for a rumored operation out into the desert country and the 1st Armored Division was to be brought together and would presumably function as a unit.

The battalion was in the first serial to move and we spent the night of January 5-6 on the road. Just at dawn, we passed through Thala and holed up for the day in the woods a few miles south of there, after covering just over a hundred miles. During the day, we got a big thrill from seeing a steady procession of C-47's with a nice white star and circle on their wings fly overhead. It seemed to be a regular shuttle service and, after more than a month of daily and sometimes almost hourly visits from the German air force, it was certainly comforting to see some American aircraft overhead.

Darkness found us on the road, still heading south. Several hours later we wound through a defile and some vehicles had difficulty in negotiating the stream at its bottom. This stretch of the road, which at the time held no significance for us, ran through Kasserine Pass.

German tanks were reported at various places in the nearby desert. On the night of January 9, we moved from our bivouac in the woods near Bou Chebka, along with the 13th's Reconnaissance Company and the 601st Tank Destroyer Battalion, to Sbeitla, which since the time of the Romans has been regarded as one of the key points of that section. En route we passed through the village of Kasserine, which is only a whistle stop on the narrow gauge railroad that runs between Feriana and Kairouan. Kasserine is about five miles south of the Pass, which came to bear the same name.

The terrain into which we had moved is much the same as that of the southwestern portion of the United States. If in the area between Las Vegas, Nevada, and Phoenix, Arizona, you were to substitute native huts

and camels for tourist camps and trailers, replace the population with Arabs and substitute dirt roads for the surfaced variety, you would have a pretty good approximation of Southern Tunisia.

The country is so flat, with the exception of the rugged, hilly and mountainous masses which jut out from it, that it gives the impression of a sea in which there are a series of mountainous islands. The country is semi-arid and low areas are sparsely covered with what might be likened to our scrub sage. The hills are rocky and have little more vegetation than the level country but some of the higher ground is covered by a fair stand of timber. The natives cultivate prickly pear cacti as camel feed. It grows to a height of around eight or ten feet and appears in large patches, usually in fairly well defined rows. Most such patches would provide fair cover for at least one tank or armored infantry battalion. We were surprised to find an occasional olive orchard of considerable extent but the trees were not as well grown out as those we had seen around Tebourba and Teboursouk.

What moisture falls in that area usually comes in a short period of time and, as a consequence, there is a heavy runoff and much eroding. The low ground is deeply cut across in some places, particularly adjacent to the hills and mountains. These washes or arroyos, as we know them in this country, are called oueds or wadis.

Tebessa is in somewhat higher country, closely hemmed in by the mountains and almost completely encircled by a range to the south that would deny access to vehicles except through the Kasserine Pass, the road running up from Feriana and Thelepte and the one through the Pass at El Ma el Aboid.

The main road through Kasserine Pass runs between Kasserine and Thala, which is some twenty-five miles to the north of the Pass and about thirty-five miles northeast of Tebessa. A road readily passable in dry weather, but very much of a secondary road, branches off from the Thala-Kasserine Road in the Pass and runs in a northwesterly direction to Tebessa, a distance of around forty miles.

When we came down into that area, the American II Corps had just taken over command and our Air Force was operating from fields in the vicinity of Thelepte and Feriana, which are on the level ground just beyond the mountains south of Tebessa. Gafsa, which was a straight shoot south of the airports, was held by a small Allied Force, while the French guarded the passes at Faid, Fondouk, Pichon and Ousseltia to the east and north.

Our stay at Sbeitla lasted ten days, during which the tanks didn't move out of the olive orchard where we had taken what cover we could the night we came in. The rest of CCB, consisting of the Second Battalion of the 6th Armored Infantry, the 27th Armored Field Artillery Battalion and service units, joined us in the same area. Our time was taken up with working on plans and in making reconnaissances for counterattacks against possible Axis penetrations in that general area, and for an attack which we were to launch through the Pass at Fondouk toward Kariouan.

During that period, experiments were made at camouflaging our vehicles by daubing them with wet clay the color of the surrounding country. The results were surprisingly good. The men seemed to welcome a change from the preinvasion requirements of keeping their vehicles clean and our OD paint job soon disappeared beneath a weird assortment of blotches and shadow effects which brought forth stories of individuals who couldn't locate their vehicles until someone opened a hatch.

Before our attack on Fondouk materialized, the Germans beat us to the punch by overrunning the French and a detachment of an American tank destroyer unit (equipped with the old half-track mounted 75's) to the north and broke into the Ousseltia Valley. CCB was rushed up there the night of January 19 and laid up in the woods near Maktar all day while reconnaissance elements worked out into the Valley. The following day the Second Battalion led off in an attack, which resulted in a series of sharp engagements lasting for three days. The enemy was driven back, losing a number of tanks and considerable equipment.

The battalion encountered its first German Mark VI's, which later became known as the Tiger Tank, in that operation, thereby confirming the local intelligence reports that such juggernauts were at large. The enemy used the few of those they had sparingly and the only piece of one that we were able to get hold of was a section of broken track. A few days later, the British, who were on our left flank, knocked two of them out and their rumored specifications, we were sorry to learn, had been more than confirmed.

The Battle of Kasserine was a series of engagements.

CCB was relieved on January 20 by the 1st Infantry Division. One of its regimental combat teams had participated with CCB in the drive to clear the Valley. On the night of January 28, we marched 133 miles back down to the woods near Bou Chebka, which move took us along the Sbeitla, Kasserine, Thelepte road again.

On arriving there, it appeared that big things were in the offing. While we weren't in on any of the planning above the battalion level, it didn't take a very astute S-2 to conclude that we were winding up for a drive out in the direction of Sfax, with the hopes of cutting off Rommel in his withdrawal up the coast before Montgomery. Troops were pouring out into the desert and much of the 34th Infantry and the 1st Armored Division, less CCB, were on the move, southward and eastward.

Having been told that we were in reserve, that we probably wouldn't move for a week, and to get busy on our maintenance, we lost no time in starting to pull engines and turn tracks. The battalion had been almost completely immobilized when we were alerted to move that night. By strenuous efforts, a good percentage of the outfit was ready to roll on schedule and the rest far enough along so they would be able to move the following night. On arrival in this area, we thought our troubles with the Luftwaffe were over but we soon learned differently. The enemy air continued to be most aggressive and all movements had to be made under cover of darkness. This wasn't to avoid observation but to prevent losses from bombing and strafing while on the march.

The night of February 1, we moved to Hadjeb el Aioun, a jump of just over ninety miles, which sent us back over our now familiar route of Thelepte-Kasserine. There we laid up in a cactus patch all day and the next night did some backtracking and then headed north to Maktar and then in the direction of Ousseltia. Some enemy dive bombers visited us just after daylight but did no more damage than shooting off the aerial on the command half-track. However, we took the hint and moved about a mile deeper into the woods.

There we remained for a period of two weeks. CCB was in the British First Army reserve, with the mission of being prepared to assist the French and the 1st Infantry Division if another attack into the Ousseltia Valley developed. Each company was authorized to immobilize one tank a day and the maintenance program which had been interrupted at Bou Chebka was resumed on a reduced scale. A heavy, wet snow fell during that period and lasted for a number of days, which made things pretty miserable, for we were not outfitted for such conditions and the use of fires had to be restricted because of enemy air activity.

It had become S.O.P. to have the Battalion Staff and each Company Commander, accompanied by one of his officers, crowd into the C.P. tent each evening to listen to the BBC newscast, followed immediately by the daily official German war communique which was beamed for African listeners, and then to go over whatever matters we had to take up. We hounded our Combat Command Headquarters during the day for information about what was going on with II Corps and were usually able to augment that by some sleuthing of our own.

The news was not good and it steadily grew worse. A successful American attack at Sened Station as a preliminary on a move to Maknassay had been discontinued and the troops withdrawn on the orders of our High Command. The Germans had attacked through Faid Pass and taken most of the French defenders prisoners. An American attempt to recapture the Pass failed and we took a severe beating. With the Germans now in position to cut off our forces at Gafsa, they were withdrawn to the vicinity of Feriana.

Within a matter of about a week, the entire situation had been reversed and, instead of the Americans being on the offensive and threatening Rommel's communications, the enemy was attacking, we were taking severe punishment and falling back. No one could say for sure where we were going to stop.

The stories kept coming in of how II Corps from its headquarters, which had been dug into the side of a mountain by Army engineers in a canyon near Tebessa over a hundred miles to the rear, was trying to direct combat operations down to the company level. It appeared to be always a case of the old story "too little and too late." II Corps seemed to consider it necessary to try and plug every gap between those widely scattered mountains in the desert and, in attempting to accomplish this, spread the troops so thinly that the enemy never had any difficulty in achieving numerical superiority at any point that he elected to attack. As a consequence, each small group as it was hit was either overrun or forced to withdraw. Developments continued to prove that there was no place in the command where greenness and inexperience were more in evidence than in II Corps headquarters.

It was obvious that it was just a question of time before the elements of CCB would be committed in this effort to stop the enemy and our only hope was that we wouldn't be thrown in piecemeal, as most of the other units of the 1st Armored Division had been.

We were alerted to move on February 9. This was called off the next day, only to be followed by another alert. This alerting and dealerting became a daily routine, until we finally got an order just a little before midnight on February 15 to move at once to Sbeitla.

Our movement order was an urgent one and it was going to be a tight squeeze to make the I.P. on time. As we pulled out of the woods and on to the road, we encountered delay. The French were quitting the Ousseltia Valley and there was a column of their colonial troops on either side of the road, with their pack horses, moving in the same direction we were. The column already extended for several miles ahead of us and, since they weren't able to clear the road because of the precipitous sides in several places, our rate of

march was slowed to theirs until we came to a point where our routes divided. From there on, we had clear sailing and we were waved off the road into an assembly area north of Sbeitla well before daylight.

I went on to where I understood CCB was to be located, but couldn't find them. Having seen the C.P. sign of the 1st Armored Division along the road, just northwest of Sbeitla, set up in a big cactus patch, I returned there, where the Assistant G-3 gave me CCB's coordinates. I received a brief report on the situation, which not only verified all of the bad news that we had heard but added a great deal more. During the previous two days in the fighting around Djebel Lessouda and Sidi Bou Zid, the Division suffered the staggering loss of two battalions of tanks, most of an armored artillery battalion, two reconnaissance companies, all of an attached 155mm field artillery battalion and one and a half battalions of attached infantry.

Daylight was breaking on the morning of February 16 when I left Division and I soon located CCB but there were no instructions. The battalion had been assigned an open flat area and an enemy reconnaissance plane could count every one of our vehicles.

Early in the afternoon I was summoned to CCB, along with the other unit commanders, and Brigadier General P. M. Robinett, the Combat Commander, gave us our orders. II Corps was withdrawing from this area and the 1st Armored Division was charged with occupying a defensive position covering Sbeitla. CCB had, in turn, been assigned the mission of defending the sector to the south of Sbeitla and was to be prepared to counterattack.

The Second Battalion was directed to take up a position at once to the south of Sbeitla and to prevent any enemy movement between the town and a mountainous mass that lay seven miles to the south. During our previous stay in the olive orchard, east of Sbeitla, we had thoroughly familiarized ourselves with this section. The battalion closed in our assigned sector within an hour after we were told to move. This was done in daylight and, as we passed through Sbeitla, the men manning the 90mm ack-ack guns that were defending the dumps in that area, looked very much relieved to see some friendly armor going in the right direction. They had been ordered to be prepared to use their guns in an antitank role which would have meant some interesting shooting for they were not equipped with sights for direct firing and, we were told, had no AP ammunition.

Platoons of the reconnaissance company established themselves well out to our front, a tank destroyer unit, armed with the half-track 75's, went into positions to the east of us and our infantry battalion occupied a pass on the hill mass to our right flank. Reconnaissance was made by the three tank company commanders of the battalion and their officers for positions to be occupied just before daylight.

Several things stand out in my mind from the events of the night of February 16-17. A high-pitched staccato voice kept cutting in on our command net, jabbering away in German. A bunch of replacements were dumped on us and the trucks that brought them up left before we could refuse them so we had to fit them in wherever there was a vacancy in a crew. A detail of weary tankers was ordered to assist the engineers in laying mines. About the time they were to go to work, German tanks made a sortie down the road, firing as they moved. Just in case there was any possible doubt in the enemy's mind as to how hard pressed we were, how hopeless our higher command regarded the situation, and how little confidence it reposed in our ability to perform our assigned mission, the ammunition dumps were blown up in Sbeitla, with a wonderful show of pyrotechnics. The display was completely unappreciated so far as we were concerned.

Shortly before dawn, our liaison officer came to take me back to see the Combat Commander. He was in a half-track in a wadi, a few miles to our rear. The Division service elements had moved out during the night, other units were in the process of leaving and our mission remained unchanged except that the order now was to hold Sbeitla until 1100 hours. I was told to be ready to counterattack, if such a move were ordered. The battalion was all in position on my return. I had a conference with the Company C.O.s and a scheme of withdrawal was agreed upon. Our reconnaissance had disclosed that there would be no difficulty in pulling out without going back through Sbeitla.

It then became a case of just waiting and the morning dragged on without anything happening. We could see a few of what we understood to be our third battalion's tanks in position off to the side of the Hadjeb el Aioun road, north of Sbeitla, but they gradually pulled west of Sbeitla.

The enemy's watches must have been pretty well synchronized with our own for just at noon I counted

Sidi-Bou-Zid where the First Armored Division suffered staggering losses.

thirty-five enemy tanks come rolling over a rise in the ground almost to our direct front, a distance of about three miles away. There were others but I didn't have time to count them.

The tank destroyer battalion soon found things too hot for them and they came streaming back. As the enemy fire began to land around us, I ordered the battalion mortar and assault gun platoons, which had been immediately behind the tanks, to take up a position further to the rear. The field artillery battalion that was also in our general area was ordered to displace and took off for a new position.

Our boys, with the exception of one platoon of the right company which, of necessity, was sitting out in the open, were in excellent positions to meet the attack without disclosing their positions until they fired. There was a series of small wadis running at right angles to the direction of the enemy's approach and our tanks were so favorably located and their camouflage so effective that they were difficult to detect until you were right on them.

We held our fire until sure it would be effective and then let the tanks that were in view have it in what amounted to almost a volley. It stopped the attack cold and the enemy was obviously very much surprised to find that they had run into some organized resistance.

The artillery battalion assigned to support us and which had left an F.O. with me, did not give us a round of fire while we were in our initial position. I never determined whether it was because of a breakdown in communications, whether they were too busy firing missions for someone else or if it was because they didn't have a battery in position to reach the targets on which we requested fire.

However, there wasn't too much reason to complain on that score for we weren't receiving any artillery fire ourselves. It was a tank battle. We had the advantage of being on the defensive and well defiladed from the front. However, this advantage began to diminish rapidly as the enemy, which was in great strength, began to locate our tanks and work up to them. Losses started to occur and the center company which was somewhat out in front was forced to pull back slightly in order to keep from being cut off.

As things became increasingly warmer, I advised CCB that we would soon be in serious trouble if we were not allowed to displace. Word came back that we would have to hold until the infantry battalion on the hill mass to our right was withdrawn. Fortunately, we were informed soon after that a route had been found to take the infantry out which would permit us to commence our withdrawal as we saw fit.

I had just given the word to execute our previously agreed upon plan, when I received orders to send a platoon into Sbeitla since it had been evacuated by the rest of the Division. A platoon from our left company, which was still equipped with the old M-3's, was dispatched on that mission. The Company Commander was instructed to withdraw that platoon from Sbeitla when his company displaced. This was done, the platoon leaving by the main road, west of the town, without loss.

Our plan of withdrawal was simply one of leapfrogging to the rear, with one company displacing, while the other two stepped up their rate of fire to cover its movements. When the right company was well on its way to a previously designated position, astride a large wadi which ran generally in the direction of the enemy advance, I started back and ordered the second company to commence to move.

As the command tank entered this main wadi, I spotted a German tank already in it, having just rounded a bend about three hundred yards below me. It was only partially visible and I didn't wait to see what the effect of my gunner's first shot was but continued on across the wadi. However, we had hardly cleared the spot where we fired when a shell broke the right track on my tank and we were immediately hit again and this time the tank burst into flames, the driver was killed and the assistant driver wounded.

Although under machine-gun fire the moment we hit the ground, the tank gave us enough cover to crawl to a point where another bend in the wadi permitted us to stand erect. A small group of us from knocked out tanks continued on up the wadi but two enemy tanks caught up to us, opened up with machine guns and forced us to scatter into adjoining wadis tributary to the one we were in. I was much relieved at that point to catch a glimpse of the last company of the battalion displacing from its original position retiring in good order on the other side of the main wadi from me.

My experiences for the next few hours were far from dull and something of a story in themselves. I lay behind one of the smallest of the smallest species of brush found in Tunisia for better than an hour, alternately cussing our artillery, which had opened up fire on these tanks, wondering if I was going to be a casualty of our own fire, crushed by the next German tank that came along or just finished off with a spray of small-arms fire or a hand grenade tossed in my direction. As dusk settled in and a skirmish line of enemy infantry appeared in the distance coming my way, I decided it was high time to take off and made a run for it into the broken country on the side of the wadi opposite to where I had been lying.

The enemy for awhile very obligingly kept shooting up flares, apparently to mark their advance, so I had some guidance in giving them a wide berth. All night I headed in the direction of Kasserine, with my admiration and respect for the infantry mounting as I plodded along. Things soon quieted down and it wasn't long before the only noise was the incessant barking of every Arab dog in the countryside.

Our frequent trips along the Kasserine-Sbeitla road had familiarized me with a wadi about two miles east of Kasserine that had required continual engineering work to make it passable. It was the drainage through which the water came out of Kasserine Pass. That

seemed to me to be a logical spot for our troops to have established a roadblock so I waited near it until daylight for fear of being fired upon by friendly troops. When it became light enough so I could be recognized, I eased up to the point to find that it was undefended, although some effort had been made to render it impassable through demolition.

I began to feel very uncomfortable for I would have had little chance to escape detection if some sharp-eyed enemy reconnaissance unit appeared on the scene. At that point, I began to wonder if I might not still be behind the enemy and that they possibly already held Kasserine.

Accordingly, I started along the top of the wadi with the plan of leaving it a couple of miles before it entered the Pass, heading directly up the shoulder of the mountain that ran out from the Pass. While skirting the wadi, I joined up with two French colonial soldiers who had escaped from Sidi bou Zid. It was through their intercession that an Arab family took us into their tent and fed us. We had a few bad minutes when a little Arab boy came rushing in, excitedly shouting "Allemands! Allemands!" and gesticulating in the direction from which we had just come. Investigation disclosed no one but we didn't tarry long and our host seemed glad to be rid of us.

As we neared the road, I noticed a peep come cautiously out of the Pass and proceed slowly towards us. Not being certain as to its identity, we took cover. It continued to move along slowly and, when it became apparent that the occupants were Americans, we disclosed ourselves. It was a reconnaissance peep that was looking for survivors of the tank destroyer battalion that had been with us a short time the day before. They decided to take my word for it that about all they could expect to find for sure were the enemy and offered to take us back into the Pass.

As we started through, I observed a few men and a couple of 37mm's set up covering the road. I was told that the engineers were organizing a defense of the Pass. We soon located a maintenance outfit of the 1st Armored Division which was repairing some of our tanks and a few hours later I was with my outfit. They had come through the Pass during the dark, halted briefly, and had then been ordered to El Ma el Aboid, to the south of Tebessa, where it was expected another enemy attack would develop.

I found that the battalion had lost ten tanks during the withdrawal. The next day there was much activity trying to match up our extra men with battle-worn M-4 tanks drawn from the surviving units of the 1st Armored Regiment, and in reorganizing. I went over to CCB to report and paid a visit to one of our companies which had taken up defensive position on the road leading out into the low country.

I got back to the battalion area early in the afternoon, just in time to receive word that we were to move at once to Thala. Just as we were well strung out on the road, an enemy reconnaissance plane came in and looked us over so I had visions of our position being replotted shortly afterwards on the enemy's G-2 maps.

We were a pretty glum lot. So far as we knew, ours was the only medium tank battalion left in the Division that was in shape to fight, and, while we had no other word than to move, we knew it meant trouble. We realized we had been fortunate to come off as lightly as we had in our last engagement and we were not sure that our luck was going to continue to hold. Our spirits weren't improved any when a cold rain commenced to fall.

En route we received word by radio of a change of destination and that we would pick up a guide at Haidra, which was on our line of march to Thala. My reconnaissance officer, who met us there, said to turn the column south and keep them headed down the road while I was to go to General Robinett and get my orders.

I found the CCB Commander and his Exec., Lt. Col. B. S. Cairns, in a C.P. tent, a short distance off the road. From them I learned that the Germans had broken through the Pass and were reported to be in Thala, which was or had been held by the British. The General said that General Fredendall, the II Corps Commander, had given him all of the American troops that were immediately available and ordered him to restore the situation at Kasserine Pass. These troops were scattered, some units were badly disorganized and he still had to establish contact with most of them. The General had been unable, as yet, to get through to the British on his left and didn't know where the other American forces were on his right. It was his opinion that the Germans were not so much interested in taking Tebessa as they were in capturing the airports from which our bombers were operating at Youks les Bains, which was ten miles to the west of Tebessa.

The mission of the Second Battalion was to secure a road junction on the Tebessa-Kasserine Road and, at daylight, to move forward to contact and then push forward. However, I was warned to proceed with caution and not to permit the battalion to get knocked out for it was the only tank force which was immediately available to deny the enemy its drive on Tebessa.

This session did not last long and the battalion was still passing when I reached the road. A guide, who had been sent ahead, was stopping the tanks at the designated junction when I came up and the battalion was already forming a sort of a covered wagon circle formation, with the half-tracks and peeps in the center, which it was our custom to adopt under such circumstances of relative isolation. It had been dark before our advance party reached the spot, and, since we only had a 1 over 200,000 map of the area, we knew very little about what kind of country we were in.

One man was kept on guard in the turret of every other tank and a detail was stationed on the road to check the stragglers that were coming back from Kasserine. They were exhausted and disorganized infantrymen and engineers from the small force that had been

left to guard the Pass and they reported things as being in a bad way. The fight was still in progress, with frequent gun flashes in the direction of the Pass twenty miles away, and you could see the red glow of fires. No news was received during the night except that our artillery battalion had gone into position some place to our rear.

With light of the next morning, February 21, we found we were right out in the flat. The open country extended to our front in the direction of the Pass and for miles to our left. We were close to the lower hills of a range of mountains on our right, which ran down to and formed the west shoulder of the Pass. A series of hills were to our rear. CCB had established its headquarters back of one of them.

Just as we were becoming aware of our extremely exposed position, some friendly tanks appeared, coming from the direction of the Pass. They were the survivors of a company of the Regiment's third battalion, which had been with the force assigned to defend the Pass. It was the flashes from their guns that we had observed during the night. They were followed almost immediately by elements of our reconnaissance company which had preceded us on the move the day before. Two platoons during the night had gone to within three miles of the Pass where they had gotten involved in some crossfire before pulling back. The tank company commander, Lt. George R. Dempsey (later Captain, killed in fighting north of Rome), whose outfit was badly shot up, told us there were no friendly troops that he knew of between us and the Pass and that he had crossed several large wadis running at right angles to the road which came down from the hills on our right.

No time was lost in moving forward and the tanks took up positions in a wadi which was just about perfect for depth, while our assault guns and mortars set up in a cactus patch to our right on the edge of the hills. We were joined there by our F.O. of a few days before, who, at that time, had been madder than we were that he couldn't get any missions fired. Everything was fine this time and he proceeded promptly to register in.

I was just on the point of sending out some battalion reconnaissance to locate the position of the next wadi when a column of trucks appeared to our front, halted a few miles distant, and men began to unload, while some other vehicles, presumably tanks, continued in our direction. They were within range of the artillery which opened fire, causing the trucks to withdraw and the personnel to scatter. This drew the attention of twelve Stukas, which came over and, after circling their target, dived down on the guns without, happily, knocking out any of them. The battalion took the tanks under fire when they came within range and, while they replied, they didn't press their attack and sought cover in some intervening broken ground.

Reports came in to us of enemy infiltration along the ridges to our right and that our infantry had been sent forward to stop them. With no other instructions than to continue our mission, we pulled back a couple of miles that night to resupply. Once again, we had to provide our own security. We had a company of the 894th Tank Destroyer Battalion, who were new to us, attached during the night, along with some of their reconnaissance.

As it began to grow light enough to see, we started forward to our wadi of the day before but, on approaching it, found that it had another tenant who was in no mood to share it. However, the conditions were not completely reversed from the day before since we soon discovered that the enemy's antitank guns were not knocking out any of our tanks. Furthermore, we seemed to be gradually silencing some of their fire. Our mortar platoon laid down a smoke screen enabling one company to edge into a wadi from which a platoon was able to work around to the head of the one from which most of the enemy fire was coming.

We learned that the enemy infantry on our right had succeeded in capturing a battery of 105's belonging to the 1st Infantry Division that had been in a forward position. They were just on the point of getting them turned around in our direction when a battalion of the 16th Infantry (1st Infantry Division) and what was left of a company of tanks from our third battalion recaptured them.

Late in the afternoon a surprising number of enemy wheeled vehicles suddenly broke cover from our right front and started streaking to the rear. We didn't get all of them but our batting average was pretty good. I have often wondered if that wasn't planned in the hopes of drawing us in pursuit and into some sort of a trap.

As the light began to fail, the tank company commander, Capt. George A. Johnson (later Major and Battalion Exec., killed at Anzio), whose platoon had worked forward, reported he had a batch of prisoners. I moved over to his position and climbed out of my tank in time to see one of the most exhilarating sights, so far as I was concerned, up to that point in the campaign. A column of prisoners came marching around a bend in the wadi, with their hands held high, led by one of our tankers with a tommy gun in his hands. In the dusk, it looked like there were a thousand of them but the actual count showed just under three hundred. They were a mixture of Germans, in Afrika Korps uniforms, and Italian Bersagliere, who were wearing their traditional plume of feathers in their pith helmets.

When we pulled back to resupply that night, an armored infantry company, which had been made available to us, took up positions to ensure that we wouldn't have to worry about the lease on our wadi. All that night the 68th Armored Field Artillery Battalion, which had joined CCB's force, pumped shells in the direction of the Pass and a series of bomb runs were made on it by our Air Force.

Daylight the next morning found us scavenging the equipment and supplies that the enemy had abandoned. One of the most acceptable finds was a truckload of American Air Corps' rations, which had been picked up from the dumps hastily abandoned at Feriana. We

hadn't been getting anything but cold "C" rations for a long time and it was nice to share some of the Air Corps' more diversified menus.

Everyone was trying to get a souvenir from a wide selection of towed antitank guns, trucks, Volkswagons, down to motorcycles and a variety of small arms. It took a little prodding to get a reconnaissance platoon, which had been directed by CCB to move out ahead of us, away from this stuff. They started on a swing to our left flank which had been wide open since we started this attack, and I sent a platoon of tanks on a wide sweep to our front.

Nothing was turned up and we moved forward a distance of eight miles. The artillery closed in behind us and the Tank Destroyer outfit worked along the shoulder of the mountains to our right.

At daylight the battalion moved forward another three miles without opposition to a point where it was just a level stretch to the entrance to the Pass. In this move, we passed a number of knocked out vehicles which our artillery or Air Corps must have accounted for. We had received word that there was to be an attack on the Pass the following morning and, since the forces working up through the hills on our right had not been able to keep up with us and the situation on our left in the British sector, while clear almost as far as you could see, was still unknown, it was decided to hold there until the next day. The enemy also concluded we had proceeded far enough and opened fire on us with a bombardment shelling from a battery of 210mm guns.

When our liaison officer brought up the orders for the next day's attack, I held a meeting of the company commanders and staff to consider our part in it. As we discussed the projected attack, which was to be in the nature of a screening operation for a combat team of the 1st Infantry Division, these 210mm ash cans kept whining in and erupting in our general vicinity. Colonel C. C. Benson, the Regimental C. O. who was present, offered the opinion that the enemy was withdrawing and that this shelling was just a farewell salute and offered to bet that there wouldn't be a shot fired at us the next day, which wager I promptly covered.

Daylight of the 25th found us enshrouded in a dense fog, which was something new to us in that area. The infantry had come up as scheduled and we were forced to move out blindly in order to stay ahead of them. I dismounted and went ahead of the tank several times to check our direction with a compass. As the fog began to dissipate, we were relieved to find that we were headed in the right direction and surprised to discover that Colonel Benson, who was apparently anxious to collect his bet, preceded us on foot.

The battalion was moving with two companies abreast and one in reserve. The further we went the more I became convinced that any minute the enemy would open fire. The infantry, which had been following us, began to veer off to the right and start into the hills while we proceeded on down the narrowing valley.

We reached the end of the valley without encountering any resistance and I realized I'd lost a bet but one that I'd never be more glad to pay. The road at that point goes through a defile which could not be bypassed and which we found to be heavily mined. A reconnaissance platoon that had been moving forward on our right started working down the road, pulling mines as they went. There was still nothing to be seen on the main road through the Pass, which was now just across a wide and very deep wadi from us, so I put one company in position to cover it and worked another as far forward as it could go on either side of our road.

The movement forward had, of course, been reported to higher headquarters and I was just enjoying the relief of having my shoes off for the first time in six days when up rolled Major General Ward, our Division Commander, and Brigadier General Roosevelt of the 1st Infantry Division in their peeps to inquire as to the situation. On being informed as to the status of things, General Ward asked to use my tank radio to send a message but it was not working too well so I took him over to one of the company commander's tanks. Several months ago I had a letter from a boy who asked me if I recalled the time when General Ward came up to his tank at Kasserine and sent back a message reading "The Pass Is Ours."

ARMY DAY — April 6th

AMPHIBIOUS OPERATIONS

by Brigadier General D. A. D. Ogden

This article covers in detail the technical aspects of amphibious warfare: history, experience, organization, technique, employment, coordination, logistics: the many factors necessary to the mounting of an amphibious operation. There is appraisal of the differences in method and accomplishment among the Services, one of the problems confronting our unified command. This complete appreciation assembles valuable information in one source.

Foreword

IN August, 1942, the nation found itself in a rather unusual situation. A concentric drive of dictator-governed nations had driven us and our allies from every continent in the world except North and South America, saving only the precarious footholds on the islands of Great Britain on the coast of Europe, a very precarious foothold in North Africa, and the continent of Australia, where the Australians were preparing to give up the northern half of it without a fight because they had no means of making one. Submarine warfare was exacting a heavy toll of our communications with these precarious beachheads in the remainder of the world. The Axis General Staff reasoned logically that this was the end of America. This was sound reasoning if history is any basis for drawing a conclusion. No nation had ever before carried out a successful invasion of another country over a great water distance when that nation was a strong military power and determined to resist. Furthermore, air power and modern communications made invasion even more difficult than it had been in the past.

The pages of history are strewn with the wreckage of empires which collapsed as a result of an unsuccessful attempt at invasion. The British Empire was almost wrecked on the shores of Gallipoli. Napoleon's empire never recovered from the failure of his attempts to invade England. The Spanish Empire failed with the wrecking of the great armada, another attempt to invade England. There can be cited many other examples.

We, as a nation, were faced with the choice of accepting the isolation which many of our statesmen said they had always wanted, or we had to carry out successfully a military maneuver which had never been successfully executed before. We lacked the Navy, we lacked the technical knowledge, we lacked the equipment, we lacked trained men. The only things we didn't lack were guts and determination. In this atmosphere the Engineer Amphibian Command was formed at Camp Edwards in May 1942 and started training, organizing and equipping what were then known as "Amphibian Brigades"—specialists in military invasion.

Organization of An Amphibious Force

Amphibious operations are joint operations. They must include all the power that the Army, the Navy and the air forces can get into them. There is no such thing as a partial victory or a drawn battle. These are risk-all, then win-all, or lose-all operations. One single major failure might mean the end of America as a nation. Teamwork between the three arms of the services is essential. From the Army's point of view an amphibious operation is one in which mingled land and water areas are involved and water is used as a medium of transportation.

Look at this question from another angle; that is, from

the angle of Army organization and how it may best be employed in amphibious operations. Only the best employment will be the winning employment. Our unit of combat composed of combined arms and services is the combat division. Behind these are a very large proportion of supporting troops consisting of special combat units, reserves and services. The number of supporting troops depends upon the length of the line of communications, the mission and situation. In this war, it was necessary for us to fight with the longest line of communications that any nation in history has ever sustained—communications encircling the world. Therefore, the percentage of supporting troops in our Army was large. How large it was is well illustrated by this: The strength of the United States Ground and Service Forces exceeded 5,000,000 men. They were able to place in the field 89 combat divisions of approximately 14,000 men each. Of these 89 combat divisions, 87 saw employment in combat. 89 combat divisions, with a strength exceeding 14,000 men each, will account for approximately 1,300,000 men. Of course, in the Army there must be men in training and men in transit, which will account for another 1,300,000. The remainder were all in organized troop units which we may classify as supporting troops. In other words, for every soldier in a combat unit there were three soldiers supporting him.

So much for the larger picture of the Army as a whole. Let us analyze in a similar fashion the strength of a corps. A corps normally contains three divisions. Usually its over-all strength will approach 80,000 men. Three divisions will account for 42,000 men; therefore, 38,000 or almost 50 per cent of its strength is in the supporting troops. Divisions are cohesive units. They are well trained and well organized. They generally take care of themselves in the field. All the higher staff needs to issue to a division is general directives. The division will carry them out. But the other 38,000 men in a corps are not well organized. They consist of individual battalions, regiments and companies thrown together into some sort of haphazard framework. Much of the work of the staff of a corps is necessarily concentrated on the effective employment of these supporting troops. A corps commander will usually find that his divisions are quite well trained and he cannot improve their effectiveness very much by the personal efforts of himself and his staff. The supporting troops of the corps, on the other hand, may need considerable effort on the part of the corps commander and his staff, to make them effective. Therefore, the success of a corps is largely determined by the extent to which it can effectively employ its supporting troops.

As the size of the unit increases, the percentage of supporting troops also increases, so let us look next at an Army. An Army normally consists of three corps of three divisions each, plus three divisions in reserve, or twelve divisions. This would probably total 400,000 men, of which only 168,000 men are in the divisions and 232,000 are in supporting troops, or almost 1½ men in support for one in the combat units. There is no use giving a higher commander all of this manpower to support his combat units unless he employs it to make the fighting soldier more effective in battle. The higher the echelon of staff, the more its attention must be devoted to the employment of supporting troops. Invasions have failed because the troops which supported the combat forces were not effectively organized or effectively employed.

Gallipoli A Failure

Let us consider Gallipoli, a classic example of a failure of invasion. It almost caused the collapse of the British Empire. First, the naval battle was successful. The British Navy commanded the seas. There was no air power at that time, so air power was not a factor, but in these days the air force must command the air before invasion can commence. Then what happened?

1. The troops could not get from ship to shore rapidly.
2. There were no adequate craft or adequate means of getting them in.
3. Units landed in the wrong places because of poor intelligence.
4. Tactical units were broken up.
5. Ships were loaded wrong so combat equipment was not available, where and when needed.
6. The signal net was inadequate.
7. The supply services were inadequate so troops went without food, clothing, ammunition and water.
8. The engineers were inadequate so land communications were inadequate.
9. Medical services were inadequate, with the result that troops were weakened by epidemics and wounded men died for lack of care.

The combat soldier had to make up for all of these handicaps with an extra quantity of courage and fortitude. Since he is expected to put all he has into any action, where will this extra courage and fortitude come from? It is a most fatal handicap to impose.

Two Types of Amphibious Techniques

So, in 1942, with many potential Gallipolis ahead of us, it was decided to create an organization in which these things would not happen, and invasion would be successful. These organizations were the Engineer Special Brigades. They were composed of units of supporting troops required to provide mobility and logistic support to a unit in combat on a hostile shore. Our program was successful. The Army executed forty-nine successful combat operations in the Mediterranean, Atlantic and Southwest Pacific, in all but three of which the brigade technique was employed.

The Navy and Marines also had developed a technique adapted to their particular organization. Using that technique, and reinforced by a few Army divisions, the Navy and Marines executed successful invasions in eighteen different locations.

Here is a compilation of the Navy-Army and Navy-Marine amphibious assaults in World War II:

NAVY-ARMY

1. North Africa
2. Sicily
3. Salerno
4. Anzio
5. Southern France
6. Normandy
7. Nassau Bay
8. Kiriwina Island
9. Woodlark Island
10. Salamaua (Tambu Bay)
11. Attu
12. Kiska
13. Lae
14. Finschhafen
15. Arawe
16. Cape Gloucester
17. Saidor
18. Talassea
19. Manus Island
20. Hollandia
21. Tanemerah Bay
22. Aitape
23. Wakde–Toem–Maffin Bay
24. Biak
25. Noemfoor
26. Sansapor
27. Morotai
28. Leyte
29. Ormoc
30. Mindoro
31. Lingayen
32. San Marcelino
33. Subic Bay
34. Bataan
35. Corregidor
36. Nasugbu and Southern Luzon
37. Zamboanga
38. Parang
39. Macajalar Bay
40. Tawi-Tawi
41. Tarakan
42. Brunei Bay
43. Negros
44. Panay
45. Cebu
46. Palawan
47. Balikpapan
48. Okinawa
49. Japan occupation

NAVY-MARINE

1. Funafuti
2. Tarawa
3. Makin
4. Kwajalein
5. Eniwetok
6. Ulithi
7. Palau
8. Saipan
9. Guam
10. Tinian
11. Iwo Jima
12. Guadalcanal
13. Russell Islands
14. New Georgia
15. Vela Lavella
16. Bougainville
17. Green Island
18. Mussau Island

Both amphibious techniques are founded on the basic idea developed by the Navy and Marines in the years preceding the second World War. The differences arise solely from the difference between organizations of the two forces. The doctrine and technique taught by the Navy is not wrong. It is, however, wrong for a particular type of organization such as the United States Army,

COMPARISON OF LOGISTIC ORGANIZATIONS

	Marine	*Army*
Ports of Embarkation	Navy	Army
Transport Service	Navy	Army
Stevedore Service	*Navy Special SeaBees	Port Battalions, T.C.
Lighterage	*LCT, LCM, Rhino, Navy	LCT, LCM, DUKW, 1/3 Navy, 2/3 Army
Beach or Wharf Labor Cranes	*Navy Logistic Support Companies	QM Service Cos. or Misc. Army Labor
Shore Signal Net	None	Army Shore Battalion
Construction of Roads, Dumps, etc.	*Navy SeaBees	Army Shore Battalion
Trucking Beach to Dump	Marine Combat Div. Trucks or Marine Service Regt.	Engr. Spec. Brig. Truck DUKW Cos., T.C. Truck Cos.
Dump Labor	First, Marine Combat Div., then Marine Serv. Regt.	Depot Cos. for various Classes of Supplies
Port Operation	Navy Port Director	T.C. Port Commander

*These units comprise a "Cub."

where it does not fit or apply to the organization of the Army. Therefore, it is necessary to start out by understanding the difference between the organization of the United States Army and the United States Marine Corps when working with the Navy.

The Marines are a part of the Navy and are supported by naval services. The similarity between the Marines and the army organization stops at division level. The 50 per cent or better of supporting troops found in the army higher units have no parallel in a Marine force. A Marine Corps will consist of its three combat divisions and a very limited number of non-divisional troops wholly unlike any in the Army, or a total of 55,000 to 60,000 men. In developing its technique, the Marines build from their services in the Navy. The Army uses its own services.

The composition of the Engineer Special Brigade is as follows:

ENGINEER SPECIAL BRIGADE

O–423 WO–19 EM–8199

Brigade Hq
O–28 WO–1
Brigade Med Det
O–2 EM–10
Medical Bn
O–30 WO–1 EM–384
Quartermaster Hq & Hq Co
O–8 EM–206
3 Engineer Boat & Shore Regiments
Each–O–101 WO–2 EM–2122
Brigade Hq Co
O–2 EM–104
Engineer Boat Maint Bn
O–39 WO–9 EM–913
Ordnance Maint Co
O–5 WO–1 EM–99
Signal Co
O–6 WO–1 EM–117

EMPLOYMENT OF AN ENGINEER SPECIAL BRIGADE

The mission of the Engineer Special Brigade as dictated by the War Department is, in part, as follows:

"1. . . . the . . . Engineer Special Brigade . . . will be trained and equipped for:

"a. Supporting combat landings of a reinforced division . . . and the lesser included mission of supporting a landing under administrative conditions. This requires the inclusion and training of services necessary for full logistical support. The mission requires also the operation of boat elements over long distances at sea, their training for combat, and the maintenance of these units, for protracted periods under field conditions.

"b. Rapid expansion to a strength adequate to support the landing of a separate corps under combat or administrative conditions.

"c. When stationed within the United States, assisting in the development of amphibious tactics and equipment, and the training of National Guard and Organized Reserve units and personnel."

It is important to understand what these words mean. "Full logistical support" means that the brigade will be specialists in directing the employment of all supporting troops behind the combat units, in the special situations which arise in amphibious operations. Boat elements are included in the brigade because, after having successfully landed, the amphibious phase of warfare does not cease. In the conduct of land warfare, after a ship-to-shore maneuver, the combat commander must have amphibious support. The Navy's sole responsibility is to put him successfully and safely ashore.

In the recent war, most of the continents which we had to invade were not the civilized continents of the world. A mechanized Army has in it about one vehicle for every seven men. The vehicles were the equipment which created the difference between the American soldier with his mechanical power and the foreign soldier with a rifle on his back. Don't underrate the foreign soldier in a rifleman's warfare and let us not fight him on his terms. We have to make the kind of warfare in which we will win, so there must be means of moving all this equipment in countries where there are no roads. That mobility is provided by your boat elements and they have to do things which have not been done before and go places which have never been entered before. They have to have both daring and proficiency.

Shore-to-shore operations are an Engineer Special Brigade specialty. There is no such thing as division of amphibious force into Army, Navy and Air Force. Each carries a share of responsibility and that share is as large as it is able to carry. It is the Navy's responsibility to win the naval victory which will insure command of the sea, to load and transport the army forces, to deliver them safely upon the enemy shore. The Army commander then takes the responsibility for the conduct of the land war. Fire effect on the beach to be invaded is very potent. A wise enemy will not stay and be obliterated. We found their usual practice was to withdraw from the area covered by the naval bombardment, let the landing force commence to land, and then fight from that point. If the combat resulted in victory for our side the enemy force had yet lost nothing but a little land. Our real objective was the enemy's force. Before it could be decisively defeated it had to be pursued and destroyed or captured. And here is where land and water mobility is essential. When we are victorious on our beachhead we must exploit the success. We must pursue and capture the defeated enemy and have the necessary mobility to accomplish this. This is provided through the medium of shore-to-shore operations. They are amphibious support of land warfare. The Japanese taught us how in China and Malaya. We use some of their technique.

ORGANIZATION OF AN ENGINEER SPECIAL BRIGADE

In order to understand more fully, note the Table

of Organization of an Engineer Special Brigade, illustrated by Figure 1.

It consists of three regiments which are grouped into regimental task groups, similar to regimental combat teams of an infantry division. Each regimental task group when given the proper number of attachments, is capable of handling the logistical support of one combat division. The brigade furnishes support for one corps.

The Engineer Special Brigade is a combat organization specializing in the rapid establishment of logistic support under fire. It is not designed for unlimited expansion nor for long continued operation. It is the spearhead of the fixed logistic organization which must ultimately succeed it, which we will call the Army Service Command. This organization will be capable of indefinite expansion and enduring operation. Its operating facilities take time to install. In practice the Engineer Special Brigade commences operations on D-Day and carries responsibility until the Army Service Command has established itself and taken over, usually about D plus 30. Thereafter the Engineer Special Brigade is relieved and made available for other operations, about D plus 60.

The functions of a shore party are as follows:

1. Stevedoring;
2. Lighterage;
3. Lighterage control;
4. Shore services for army ships;
5. Internal signal communications;
6. Unloading lighters at beach;
7. Construct facilities for unloading;
8. Set up and establish information center for incoming troops;
9. Determine land utilization within beach support area;
10. Establish and maintain perimeter defense;
11. Transportation of supplies to dumps;
12. Unload, store and issue supplies at dumps;
13. Construct roads, parking areas and hardstands;
14. Establish ordnance repair service for all troops within the beach support area;
15. Hospitalization, collection and evacuation of all casualties from landing force;
16. Custody and evacuation of prisoners of war;
17. Set up and establish a force water point;
18. Control of traffic on the roads.

The overhead organization which establishes and organizes this installation for a division is the regimental headquarters company and the regimental staff. It has a large signal section in order to be able to establish and operate basic signal communications for the entire beach support area. It has an embarkation section for the shipping control which it exercises. The organic troops of the Engineer Special Brigade furnish the essential services usually performed by their respective services: engineer, medical, quartermaster, ordnance, transportation corps. The actual handling of cargo is done by attached troops, stevedoring by port companies, beach labor by quartermaster railhead or service companies, dump labor by depot companies. If the assault is on limited objectives, that is, action will terminate within a limited time, the Engineer Special Brigade is the only logistic agency to operate here. If, however, the logistic agency is to operate for a long time or be built up to much more than its D-Day proportions, the work which the Engineer Special Brigade inaugurates on D-Day is taken over by the Army Service Command.

The organization which takes over the shore party commander's duties is known as a "Base Command." The Base Command consists of the following:

1. Port Command—handles shipping, stevedoring, lighterage, wharf labor and transportation, cargo control.

2. Motor Command—handles all motor transportation in base.

3. Area Command—allocation and use of areas, defense.

4. Service Command—coordination of all service functions and troops, supply, construction, medical, signal, ordnance, etc.

The troops "attached" to a shore party are usually troops belonging to the "Base Command" and will revert to the command of the base commander when he assumes responsibility about D plus thirty. The base commander arrives on the beach about D plus fifteen with his port commander, engineer and signal officer. They proceed at once to lay out their base and construct headquarters, road and signal installations. An orderly turnover of functions and responsibilities takes place between D plus thirty and D plus sixty. Thereafter the Engineer Special Brigade unit is released for further operations.

In order to carry out our mission we must give amphibious capabilities to the unit which we support. Note that the mission is to give help, and not to ask for it. This assistance may consist of:

1. Staff advice, which means amphibians must:
   a. Know the characteristics of naval amphibious craft;
   b. Know naval procedure;
   c. Be able to tie into the navy signal net rapidly;
   d. Be fully conversant with the writing of amphibious orders;
   e. Have amphibious logistical data available at all times.
2. Help in embarking, which implies:
   a. The layout of an adequate signal net;
   b. The layout and construction of a good road net;
   c. Construction of jetties and embarkation points;
   d. The organization and training of personnel to form a competent organization.

3. Help in disembarking, which means:
   a. Taking over full responsibility for the organization and operation of a beach support area;
   b. Furnishing a trained team for beach support area organization, experienced in operating:
      (1) Cargo control
      (2) Stevedoring
      (3) Lighterage
      (4) Marine dispatch and messenger service
      (5) Signal installations
      (6) Ships service
      (7) Evacuation of sick and wounded
      (8) Evacuation of prisoners of war
      (9) Establishment of dumps
      (10) Use of attachments.
4. Water transportation and lighterage;
5. Construction;
6. Operation and defense of beach support areas;
7. Furnishing a reserve of engineer construction troops.

Landing A Division Task Force

How big a job is it to land a division task force? The number of troops would be as follows:

Division	15,000 men
Air Force component	5,000
1 Engr Boat & Shore Regt with attachments	5,000
Engrs, for airfield construction, etc.	3,000
Dumps and service troops, antiaircraft, etc.	2,000
Total	30,000 men
Rolling stock of all kinds (Note proportion of one to seven)	4,000 vehicles
Daily tonnage requirements	1,500 DWT tons

The daily consumption of supplies would be as follows:

Drummed petroleum products (Mostly aviation gas)	300 tons
Bombs	150 tons
Ammunition	100 tons
Engineer Supplies	100 tons
Rations, clothing and other supplies	100 tons
Total	750 tons

Note that consumption is 750 tons a day, but the daily tonnage requirement is 1500 tons a day. This is because a unit in hostile country must have a reserve of supply. It cannot function without a stock level, without courting disaster, as shipping may be interrupted. The stock level is fixed by the higher commander and depends upon the local situation. Let us assume that the stock level would be thirty days of supply and that it will be attained within thirty days after landing. Then we must handle on shore double our daily consumption until we have a reserve of thirty days supply in stock. These are our critical days after landing when the beach organization must be capable of handling twice the daily consumption, and it generally does.

Notice also the large proportion of supplies which are consumed in combat—aviation gas, bombs, ammunition, etc. When we stop fighting this consumption falls off very rapidly so the consumption of supply under administrative conditions, particularly after stocks have been built up, is very much lower than in the days immediately following a landing. It also leads to very erroneous conclusions resulting from maneuvers. In a maneuver we consume none of the combat items of supply, have few supporting troops, since they are seldom available, and do not build up stock levels. Hence, a reduced strength division in a maneuver might do very nicely on 150 tons a day when the same division would require ten times as much under combat conditions.

The shipping required to move this task force will total seventy ships, as a characteristic figure, plus naval combat vessels; a very large number of ships to handle all at one time. How many ports in the world are capable of handling seventy ships almost simultaneously? They may be counted on the fingers of one hand, and this is enough for only one division. Suppose we were landing four or six or twenty divisions? The number of ships involved is staggering, and commercial ports are simply not designed to handle either men or cargo at anything like this rate. So the Amphibian Engineer who finds himself in this situation must be an expert in port expansion and development.

The shore party which is given as totaling 5,000 men breaks down about as follows:

1 Engr Boat & Shore Regt group	2,500 men
1 Port Bn of 3 port companies, which works 3 ships at 500 tons per day per ship	600
1 DUKW Company	200
1 Truck Bn of 2 companies	250
1 MP Company (regulates traffic, guards prisoners)	200
1 Amphibian Tractor Company	175
1 Evacuation hospital	350
2 QM service companies (beach labor)	400
1 QM gas supply company	125
1 Ordnance ammunition company	179
Total	4,979 men

This organization provides trucks as follows:

Engr Boat & Shore Regt	18 trucks
2 Truck Companies	80
1 DUKW Company	48
1 QM Platoon	16
Total	162 trucks

Note that some of these trucks are engineer dump trucks, used for handling cargo in the high pressure initial stage. They will haul road material later on. A useful rule of thumb is to have one truck for every ten tons of cargo to be handled daily. There will be twenty-five tractors of D-7 or D-8 capacity on the beach. There will be 126 LCM's in the Engineer boat battalion. Four thousand vehicles, if placed in column with one hundred feet of road space allowed for each unit, will require eighty miles of road. It is impossible to build eighty miles of road on a beach support area and therefore all the vehicles do not come ashore on the first day. Normally, about 50 per cent of them come in with the first combat lift, but the soldier needs these vehicles and he is handicapped in battle until he gets them all in. The first thing a shore engineer encounters is 2,000 scrambled vehicles in terrain where there are no, or very poor, roads. He must anticipate a traffic jam. He wishes he had about thirty miles of road at once and eventually builds about that much. There must also be parking areas for getting vehicles off the roads, hardstands for stores, and bivouac areas for the transient troops. Actually, a freight and passenger station has been established and both freight and troop units are streaming through and will continue to do so for a long time. Because this started with a traffic jam, the shore party commander must have good MP's to liquidate it and avoid serious consequences.

Here is a simple rule of thumb for calculating stevedoring: One port company can furnish hatch crews for the two shifts on each of five holds. That is, it can stevedore one ship. It should get 100 tons per hold per day, or 500 tons per ship per day, and this a high figure, which is difficult to maintain in practice. If a battalion of three companies worked three ships, it should get 1500 tons per day. There must be lighter capacity for unloading 1500 tons to the shore. There must be trucks to handle 1500 tons to the dump and the men in the dump to unload the trucks carrying the 1500 tons. It is fatal to put the pressure on mere unloading tonnage and ignore the rate of storage and inventorying in the dumps.

Landing Procedure

The naval sequence of a landing operation might be something like the following:

1. About D minus 5, the minesweepers move in and sweep the seas in which the fleet is to maneuver. This is a very hazardous operation. They are accompanied by naval air and naval combat units. The naval and air bombardment might start then, or certainly must start by D minus 1.

2. On D minus 1, an underwater demolition team is put ashore to demolish underwater obstructions on the beach.

3. On D-Day, at first light, about 0600, or H minus 2 hours, the cruiser bombardment commences. This is long-range heavy fire against pin-point targets. (H-Hour, of course, depends upon tides and the situation.)

4. At 0700 hours, or H minus 1, the destroyer bombardment commences. This is area bombardment and the beach and considerable areas to the right and left of the beach are covered by it until 0750, or ten minutes before H hour.

5. By this time, rocket ships have crept in toward the shore and the rocket bombardment (and sometimes air strafing) is the last fire effect before landing.

6. The first waves land at H hour, which is generally 0800, and consist of infantry and foot troops with light weapons.

7. Each succeeding wave brings in heavier equipment and weapons and more heavily equipped soldiers. In order to give the first waves firepower and mobility they are generally carried in amphibian tractors, accompanied by amphibian tanks. DUKW's have been used as a substitute for these upon occasion but are not particularly well suited. Failing these, LCVP's are used.

8. About 0820, or H plus 20 minutes, the first LCM's land with the early beach tractors and the first heavy equipment. LCM's should be plentiful from that time on.

9. About 0930, or H plus 90, the first LCT waves will land, carrying the first quantity loads of vehicles. The beach exits must be complete by that time in order that these vehicles may get off.

10. About 1000, or H plus 120 minutes, the LSM's land. Each LCT and LSM carries about thirteen vehicles.

11. About 1300, or H plus 5 hours, the LST's, carrying large quantities of vehicles, probably fifty each, will land.

12. By that time the road net must be developed. Occasionally LST's are unable to land for several days and their vehicles and cargo must be lightered ashore by the shallow draft amphibious craft of the LCT or LCM-type. It is not too difficult to empty LST's by lighterage. When the LST's begin to land, the traffic build-up begins in earnest.

Description of Naval Vessels

What are the characteristics of some of these ships? It is important to know them.

A. Amphibious Force

The basic craft of the Navy's amphibious fleet is the APA, auxiliary personnel assault. It is primarily a personnel carrier. Usually it is a victory type ship, making sixteen knots or better. It carries 131 officers and 2060 enlisted men, 70 vehicles and 400 tons of cargo. Individual ships differ, but the hull is 459 feet long.

2. The AKA, auxiliary cargo assault, is fundamentally a cargo carrier, combat loaded so that cargo can be discharged rapidly. It is a development of the victory hull and makes a maximum of 17 knots. It carries enough personnel to handle the cargo, about 550 men, 120 vehicles, and 650 deadweight tons of cargo.

3. The AK is a straight cargo carrier. It carries a very limited number of personnel, 400 men, 20 vehicles

and 1800 tons of cargo.

4. The APA and AKA carry LCM and LCVP in their davits and are capable of unloading themselves.

5. The LST, landing ship tank, is the largest size of ramp vessel, capable of beaching. It is 328 feet long, draws 3′ 10¾″ of water at the bow, with lightened ballast tanks, but generally with a load on board it grounds in 6 feet of water, It has quarters for 163 men and carries 13 very heavy tanks or 70 lighter vehicles. The personnel accommodations are intended for the drivers and attendants of the vehicles carried. In warm climates a large number of men can be carried, sleeping on the decks. In many of the Southwest Pacific operations, up to 750 men were carried in the LST's, sleeping where they could. The average passenger load was 400. The maximum carrying capacity of the LST was reached in the repatriation program between Japan and North China and Korea, when a total of 2200 people per load were carried in LST's. The LST makes 10.8 knots. It has a long cruising range. Its bottom slope, when trimmed, is 2% so with a 2% bottom slope, a 4½ foot draught forward and a 328 foot length, the stern will draw 6½ feet more water than the bow, if the ship is properly trimmed. In order to lighten the ship forward, however, it is necessary to ballast it down aft so when the bow draws 3 feet of water the stern will usually draw 14 feet.

6. The LSM, landing ship medium, is 203′ 6″ long. It draws about 3′ 5¾″ of water forward and 7½ feet aft. It makes 13.2 knots. It carries 13 vehicles and has quarters for 48 men. It has ample quarters for an around-the-clock crew. The greatest difficulty with the vehicle-carrying amphibious craft of the navy is that few of them can make the standard fleet speed of 15 knots and the LSM was designed to fill the need for a fast vehicle carrying craft, but in order to build the speed and necessary crew's accommodations in them, the cargo capacity is seriously restricted.

7. The LCT, or landing craft tank, is a powered barge used primarily for lighterage. It is 117′ 6″ long has a 32′ beam and carries 13 vehicles. Its crew's quarters are limited and the endurance of the crew usually limits the endurance of the craft. It has a large fuel capacity and a range of about 700 miles, but light engines. It will carry 13 vehicles or 160 tons of cargo and has no passenger sleeping accommodations. It draws 4½ feet of water aft, 3 feet forward and requires about 6 feet of water to safely operate. It makes 8 knots when cruising and that is a serious handicap, because it will not keep up with anything except very slow convoys.

B. The Combat Force

1. The CV, or aircraft carrier, will be from 600 to 800 feet long, 105 feet wide, drawing 28 to 30 feet of water, and will fly over 80 airplanes. Their speed exceeds 32 knots.

2. The escort carrier, or CVE, is an unarmored merchantman equipped with flight decks. They are generally built from the victory type ship. Length: 465 feet to 498 feet; speed: 16.5 knots.

3. The BB, or battleship, has about the same dimensions as the carrier. These dimensions are usually limited by the size of the locks in the Panama Canal, which are 1,000 by 110, with 32 feet permissible draught. In our modern ships, both carriers and battleships, we are exceeding the capacity of the locks in the Panama Canal.

4. The destroyer, or DD, is approximately 340 feet long, carries 175 men and makes 35 knots. The destroyers have all the speed built into them the navy can put in a ship of that size. They mount 5-inch guns.

5. The APD, or armored personnel-carrying destroyer, was provided by the conversion of old destroyers to carry personnel for raiding parties. They include a liberal proportion of LCVP's. They carry 150 personnel only, without any vehicles except jeeps.

Loading the Division Task Force

Here is a chart showing how this division task force might be loaded out in an amphibious force:

Type	*Number*	*Personnel*	*Vehicles*	*DWT Cargo*
APA	9	19800	630	3600
AKA	3	1650	360	1950
AK	6	2400	120	10400
LST	20	3500	1000	2000
LSM	20	1000	250	....
LCT	12	314	157	....
	70	28664	2527	17950

The APA carries a battalion landing team; therefore, for each battalion in a division we will have one APA. Since there are three regiments, we must have a minimum of 9 APA's. For each 3 APA's there will be one AKA carrying the assault cargo vehicles which cannot be carried in the APA. The heavy division cargo will be carried in AK's. There have been allocated a liberal number of AK's to this particular expedition. Enough LST's, LSM's and LCT's are added to bring the force into balance. There are 70 ships that carry 28,664 men, out of a total force of 30,000; 2527 vehicles out of a total of 4,000 and 17,950 tons of cargo out of a total of whatever has been determined will be necessary, at a rate of 1500 DWT for the first 30 days.

Tonnage

In discussing cargo, we speak of deadweight tons of cargo and we mean long tons of 2240 lbs. each. There are many different kinds of tons. There is a short ton of 2,000 lbs. and a long ton of 2240 lbs. These are measured by weight. Then there is the measurement, or ship ton, which is a convenient unit used in calculating ship's capacity. It is 40 cubic feet. Its weight varies with the specific gravity of the cargo. There is also the register ton of 100 cubic feet. Ship tons have little relation to weight. A ton of belly tanks would be different from a ton of armored vehicles.

In unloading military forces, there is impedimenta, such as troop equipment and supplies, and cargo ton-

nage, which is the material carried over and above the troops' equipment. After landing there is useful tonnage, or the tonnage which the troops actually will consume. The nonuseful tonnage is the tonnage which must be handled in order to get out the useful tonnage. This would include dunnage; that is the timbers which are used to pack the cargo, which is a considerable item on one ship. Nonuseful tonnage also includes miscellaneous cargo which has been added to the ship, which is of doubtful need at the point of destination, yet the ship must be fully unloaded. If not fully unloaded, the nonuseful tonnage must be handled twice, once to get it out of the way and once to get it back aboard the ship. Obviously, when discussing tonnage, it is important to know *what kind* of tonnage.

Ordinarily in an assault landing of one division, about 7500 tons a day of all kinds of cargo will be landed in the first days of high pressure landing. That means deadweight tons, measured by the ship's displacement and includes everything. After the main assault has been made, 1500 tons a day will have to be handled, but this is all consumable, useful tonnage and excludes troop impedimenta, personnel or equipment and nonuseful tonnage. The actual tonnage handled may be 3,000 to 3,500 deadweight tons daily in order to get 1500 useful tons. Troops pitch in and unload themselves. They do not require much stevedoring, beach or dump labor or even transportation, as they use their own transportation. The term "useful tonnage" is used simply because it is a convenient measuring stick of the amount of effort exerted.

Summary

Let us go back to the difference between the technique of the Navy and Marines and the Navy and the Army in effecting a landing on a hostile shore, and start with a description of the first of these: as an aid in this comparison, note Figure 2.

The mission of the Marine Corps is to seize and hold the land needed for naval bases and naval operations.

The mission of the Army is to seize, hold and organize an Army base of operations.

With the Navy and the Marines, the fleet commander commands at all times. The senior Marine officer, being part of the Navy, is subject to his orders at all times. The fleet size may be anywhere from 50 to 500 vessels. These vessels are divided into combat vessels, amphibious vessels and service vessels. In addition to what has been previously described, there are minesweepers, PT's or patrol torpedo boats, landing craft support and rocket ships, seaplane tenders, submarine tenders, etc., and in the service forces there are oilers, water tankers, drydocks, shop vessels, supply vessels, etc. All the naval services are afloat. They make the naval forces fully mobile. The Navy need put no one ashore for its own needs. It puts men ashore only to help the land forces operating ashore. It occupies the land solely to protect the fleet at anchor from land fire. The control of a large fleet like this is an intricate task itself. It is handled by the naval port director who has a headquarters afloat, and controls arrivals, departures, anchorages and other matters pertaining to fleet administration. Naval command is exercised by the senior officer present afloat (SOPA). This command varies with the coming and going of various naval officers. Naval forces ashore come under the shore patrol. The naval service force commander furnishes fuel, water, repairs, evacuation and supplies, to the fleet, by lighterage between ships. It is a very large undertaking to transfer supplies between the various ships.

For operating the shore facilities of a port the Navy has an organization which it calls the "Cub." It furnishes unloading service for ships and is capable of fully operating a port up to the point of handling cargo ashore with cranes. Stevedores for the ships to be unloaded are special SeaBee units. Lighters are obtained from the naval port director, who carries them in the "garrison boat pool," which is an organization similar to a Transportation Corps Harbor Craft Company. It is equipped chiefly with LCM's, usually about 40. It has shore based-maintenance, with crews trained to run their craft within the harbor. Beach labor or dock labor is furnished by "logistic support" companies. The Navy makes no use of DUKW units. A few are issued to the Marine Corps units as unit equipment. Engineering waterfront improvements are performed by naval construction battalions who build access roads, egress roads, dump roads, hardstands for stores, wharves and piers, etc. The Marines accept responsibility for cargo when they run their trucks to the beach or waterfront and it is placed thereon by the navy logistic support companies. Their responsibility therefore, starts when the cargo has been placed in their trucks by the Navy. The Marines furnish all dump organizations for their own stores. The organization provided for that purpose is the service regiment composed of a number of companies similar to our depot companies.

How simple this makes the task of a Marine division! It does not have to stevedore ships; it does not have to operate lighters; it does not unload cargo on beaches, or build roads to dumps. The cargo is shipped to the Marines by the Navy on Navy transports, unloaded and delivered to them on their trucks to travel on navy-built roads. Of course, if means are inadequate to perform these services the Marines pitch in and help out and you will often find them stevedoring ships and building roads and carrying on these other activities. The Marines have no medical service. Their medical service is the Navy medical service and their hospitals are the Navy hospitals. The Navy has sufficient of these services to support the six Marine divisions which were organized during the war. It even partly supported six more Army divisions which were used as reinforcements to the Marines. It would not be able to extend all these services to the 86 Army divisions without a very large increase in personnel.

In a Navy-Army landing, the cargo is loaded at Army ports of embarkation. It is unloaded by Army personnel.

It is carried in Army transports, lightered in part by Army lighters, unloaded on beach or docks by Army personnel. All construction ashore is by Army personnel, but the Navy does propose to furnish a naval construction battalion as a part of the shore organization which will improve the facilities for getting amphibious craft into a good beaching. The logistic agency set up on the beach is the shore party composed of an Engineer Special Brigade or regiment with Army Service Command troops attached. This may be superseded by a base command which will take over the attached Army Service Command troops, bring in more of its own, and relieve the Engineer Special Brigade unit.

In a Navy-Marine operation the shore party is furnished by a pioneer engineer battalion which is a part of every Marine division. Stevedoring is done by "ships platoons" which are improvised out of rear echelons of miscellaneous units of combat divisions. Trucks are drawn from the division. Construction work ashore is done by a naval beach battalion. This initial set-up is replaced by a Navy "Cub," to do the stevedoring, lighterage and beach labor and a Marine service regiment to do the cargo hauling, storage, and issue in the dumps.

The Navy port director comes ashore after the early phases of the landing. In the army's shore organization there is a cargo control officer who exercises complete control of cargo from the time it arrives in our transports until it is placed in the dumps. The shore party commander exercises the control over all army forces ashore except combat troops, and is generally the cargo control officer. The boat control officer exercises control over all lighterage. Officers are also designated in charge of trucks and labor.

The Army port commander generally is an officer of the Transportation Corps, who performs for Army shipping—which may be most numerous—the same services which are performed by the Navy port director for Navy shipping. The Army port commander is responsible for dispatching the ships to the docks, getting lighters and stevedores to them and furnishes necessary services, such as supplies, fuel, water, personnel replacements, repairs, etc. When the port becomes an organized port the army Port Commander takes over part of the duties of the shore party commander. The port command is generally part of a base, commanded by a base commander. Beach labor must be furnished by the Army and may come from QM service companies, ammunition companies, civilians, replacement units, casual units, or any organized or unorganized labor pool. The better trained the unit is, the fewer men are needed and the less pilferage there is, and the more effective it is. The trucks and transportation come under the shore party. Engineer and waterfront improvements are performed by the engineer shore battalion. In addition the engineer shore battalion forms a reserve which can perform any of the functions for which personnel are inadequate, such as stevedoring ships, beach labor and dump labor. Regulating this long chain of operations, placing stevedores on the ships, placing lighters alongside the ship, unloading the lighters on the beach, providing the trucks to empty the lighters, providing the men to do the work to fill the trucks, running the trucks to the dump, having them unload at the dumps and return empty for more cargo, is the duty of the regimental staff. The output of the chain is determined by the slowest and least efficient step in the chain. Headquarters of the Engineer Boat and Shore Regiment furnishes the over-all command control and communication for this whole 5,000 man set-up. That is why it is so large in proportion to the size of the shore battalion and boat battalion.

In the Army set-up there is no divided responsibility for cargo movement. It all comes under one system of control. In the Navy-Marine set-up there is a division of responsibility. It usually requires considerable effort to get coordinated action. The man who runs the ships wants to get them unloaded and get them out of the way. He has no interest in the cargo after it is ashore. The man who is going to receive the cargo is deeply interested in seeing that it is stored in an orderly fashion, so he knows what he has, and can reach it when he needs it. To bring cargo ashore in any other fashion is futile. Such cargo should be dumped at sea and never brought ashore. With the divided responsibility of the Navy and Marines, this problem often arises.

Compare the two systems and remember that they have both resulted in victory. There is nothing fatally wrong with either, but the Navy-Marine system is wrong for the Army-Navy because it ignores 50 per cent of the Army's organization. The Navy-Marine organization tends to pile cargo in the dump indiscriminately. It forces a change of organization at a critical time because the marines are forced to improvise the cargo handling facilities ashore in the first days of landing, using troops of the combat division, while the heavier naval units are coming in and getting established. Stevedoring in the Navy is better handled than in the Army, and stevedoring rates are often higher. The Army has better control over cargo and a more flexible operation. They usually do not make as good a daily tonnage record. It is definitely better in care and storage of tonnage in the dumps.

In the postwar Army there is now a conflict between the Army's amphibious technique and that used by the Navy-Marines. The Navy wants and perhaps should teach amphibious technique but they want to teach it the way it is done by the Marine Corps. In other words, they want to change the Army's organization so it would have the same relationship to the Navy that the Marines have. They want to ignore 65 per cent of the Army's strength and make no use of it, or else they don't know what they are doing. The experience of six divisions wants to outvote the 89; the experience of 18 successful amphibious operations wants to outweigh the 49. The reconcilement of these two basic concepts is one of the first problems which arises with the consolidation of the services. Obviously, it is a task which needs doing.

British Army Looks Ahead*

*by Maj.-Gen. L. O. Lyne, C.B., D.S.O.***

IT is commonly said these days that the invention of the atomic bomb and the development of other weapons of mass destruction have rendered armies obsolete. It is argued that such a gigantic advance in lethal power can not fail to revolutionize the whole technique of warfare; and that land operations of the kind which we knew in the last war are inevitably things of the post.

Whilst conservatism, to the extent of stagnation, in military thought is obviously liable to lead to disaster, there is also danger in taking too long a view in these matters. For example, there was a school of thought before the last war which prophesied that the infantryman was outmoded on the battlefield; the mass of firepower which would be developed by both sides would make it impossible for an infantryman to survive. If any army had abolished infantry it would in fact have become "dead meat" in the face of an attack by an orthodox balanced force. I have mentioned this point only to stress the importance of not being too easily convinced of the revolutionary effects of new weapons.

As I see it, although the invention of mass destruction weapons is likely to cause drastic changes in the technique of waging war in the widest sense, there is good reason to believe that the conduct of land operations will not be so drastically affected. There is, too, always the possibility that, for fear of reprisals, neither side in a future war would use weapons of mass destruction. In these circumstances any nation without orthodox forces would be defenseless. Its situation would be similar to that of a commanding officer trying to maintain discipline if he had the power to award only one punishment—death. For minor offenses he would be prevented by civilized opinion from administering his only award; thus all minor offenses would go unpunished. This may be a farfetched simile but it serves to make the point.

Having convinced oneself of the necessity of having an army at all, it is necessary to consider ways and means of keeping it up to date. After a major war the overriding consideration becomes financial economy. There is no gainsaying this. Any democracy which has been involved in war cannot afford a heavy expenditure on armaments and armed forces during the period of reconstruction. Thus we are forced to examine not only the best but also the cheapest way of ensuring progress in military technique.

In the British view the most fruitful methods of achieving this are:

(a) Scientific research.
(b) Improved methods of selection and training of officers and noncommissioned officers.
(c) The provision of an adequately trained reserve.

I will discuss in turn the British Army's plans under these headings.

The responsibility for scientific research is not, in fact, vested in Britain's War Office, but in the Ministry of Supply—a separate Ministry. It receives a special allocation of money for this purpose. However, the War Office maintains the closest contact with the Ministry of Supply on all matters of its concern. There are, in fact, a large number of Army officers with user experience holding appointments in the Ministry, thus ensuring that the Army's requirements are fully understood by those responsible for research, design and production. The Army Council now has its own Scientific Adviser who, with a small staff, is available to assist in formulating specifications for new equipments. The Scientific Adviser does most valuable work by ensuring that the Army's outlook is in tune with the general trend of scientific thought.

Selection and Training of Officers and NCOs

It is a commonplace to say that the efficiency and morale of an army depend on the quality of its officers. The first essential is to ensure that the right type of man, with the inherent qualities of leadership, is selected to become an officer. The second essential is to equip him with an education which will enable him to become a master of his craft and to acquire a thoroughly flexible mind capable of dealing with new problems as they arise. We have now developed a highly scientific technique of "selection" which is applied to all candidates who aspire to a commission. By this means it is possible to select only those men who have the necessary character and personality which a modern army demands of its leaders.

Some drastic changes have been made in our plans for officers training for the future. Before the war, the majority of would-be Regular officers attended one of two cadet colleges, the Royal Military Academy, Woolwich, for Gunners, Sappers and the Royal Corps of Signals, and the Royal Military College at Sandhurst for cadets for other arms. Young men went straight to these establishments from school. During an eighteen months' course they received a predominantly military education, for which their parents had to pay. At the end of their course they were commissioned as second lieutenants. Since the war the two colleges have been amalgamated as "The Royal Military Academy, Sandhurst." Now cadets do not arrive straight from school

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but undergo a period of service in the ranks. It is considered that, for a short period, this service in the ranks is of the greatest value in assisting future officers in understanding the point of view of the men whom they are to command. The course at Sandhurst is now free of charge to the parents. The curriculum has been changed in order to provide a first-class education in scientific and modern subjects. Great attention is also paid to basic military qualities such as discipline and leadership, but detailed military instruction is largely deferred until the cadet has been commissioned.

The Army Staff College at Camberley has been re-established on its prewar basis, but selected officers are to be admitted in future at an earlier age than hitherto, and the length of the courses has been reduced from two years to one year. Here again, the process of selection, coupled with a qualifying examination, has been instituted, whilst before the war entry into the Staff College was largely determined as a result of a competitive written examination. A new staff college has recently been added. This is the Joint Services Staff College. Officers of all three Services, as well as some Civil Servants, are eligible to attend and receive instruction on Inter-Service staff work. It is expected that the establishment of this college will go far to improve Inter-Service cooperation which is so essential both in war and peace. The Imperial Defense College constitutes the final phase of an officer's education. This college is also an Inter-Service organization and provides for the instruction of a limited number of officers of the rank of Brigadier, and equivalent, in the art of war and national war organization. A number of officers and Civil Servants of the Commonwealth countries also attend this college.

So far I have only mentioned the education of those officers who have been recognized as being likely to reach high rank. Great importance is also attached to the various "arms schools" which undertake the education of officers and NCOs as instructors and which maintain a continuous study of the tactical doctrine of their particular arm of the Service. For this latter purpose the schools of the three main fighting arms will each have a fully equipped regiment or battalion at their disposal.

Considerable research has been carried out in connection with the technique of teaching. "Method of Instruction," as it is called, plays a great part in the curriculum at all schools. The rapid turnover of men under training and the limited number of Regular soldiers available make efficient teaching all important. There will be no time to waste in the training of our peacetime army. This brings me to one of the most radical changes in the army way of life. Before the war, when we had a small volunteer and comparatively long service Army, training was for the most part confined to certain seasons of the year. The tempo varied: the pace quickened towards the end of the training "season" which usually culminated in some form of maneuvers. In the future, the greater number of units will contain a large element of National Service men undergoing their year's whole-time training. These units will, in fact, constitute a vast training organization which will be kept in continuous activity all the year round. Teaching ability will need to be an attribute of all officers and NCOs. It will be seen, therefore, that central schools for producing instructors will constitute a vital feature of our set-up.

Provision Of a Trained Reserve

For the first time in the history of our country universal compulsory military service is to be enforced in peacetime. The National Service Act of 1947, which comes into effect on 1st January 1949, provides for all males to undergo one year's whole-time service with one of the three fighting services and subsequently to be transferred to the reserve or auxiliary forces for a further six years. During this latter period each man will have to undergo 60 days' training. The young men are to be called up, at first, between the ages of 18 and 19. Students and apprentices will be able to defer their service until they have completed their studies if they wish. At any rate for the time being, agricultural workers and underground coal miners are to be deferred indefinitely.

So far as the Army is concerned the introduction of this scheme will cause great changes. I have already mentioned the general effect on the training tempo. A year is not a long time to train a private soldier in all the complexities of modern equipment and tactics. Moreover, within that time, potential officers and NCOs have to be selected and trained, so that they can take their place in the Territorial Army. It is in the latter that the great majority of National Service men will undergo their reserve training. This aspect of the scheme means revolutionary changes in the whole nature of the Territorial Army. Formerly, this force was a purely voluntary organization composed, for the most part, of enthusiasts who joined for the fun of it and out of a sense of patriotism. The majority had never been in the Regular Army and their soldiering was restricted to their spare time which they nobly devoted to military service. Whilst the spirit which inspired these men was quite first-class, the standard of their military training was inevitably not high. Their numbers were also limited.

On to this old voluntary Territorial Army it is now planned to graft the National Service element during their compulsory six years' reserve service. The voluntary element will, of course, be retained and will be required to supply the senior officers and NCOs. It is confidently hoped that they will also infuse their own spirit of service and patriotism into the National Service element.

As it is through the ranks of the Army that the majority of the nation's youth will pass, the army must accept a heavy responsibility for their welfare and character building. It is vital that this opportunity is not missed.

Task Force Butler

by Brigadier General Frederic B. Butler

Part Two of a story covering the operations of a provisional armored cavalry unit in exploiting the invasion of southern France

MY plan was now to move the Force by bounds—the cavalry scouting, advancing, securing, and the heavy column running for it when the selected area was covered. That kept us on the road a minimum of time, saved gas and provided better insurance against enemy air observance. The first bound would take us to Oraison. The second bound would be to Sisteron itself. From Oraison the action against Digne could be supported, if necessary, or, if trouble came ahead, the weight could be thrown towards Sisteron, the day's objective.

Troop B, en route to Digne, reported resistance. Advance elements had been in town but had drawn heavy small-arms fire and withdrew. The Germans had thrown no artillery, tank or mortar fire. Scout cars and tanks were pouring machine-gun fire into the town. The Maquis attack had broken down but was reforming. Another push would go in at noon.

Troop A, pushing ahead on Sisteron reached the bridge across the Durance at la Brillane and secured it. The bridge had been damaged by bombing but the armored cars crossed. The river was a formidable obstacle and it was the bridge—or else. Our engineers still were unreported, and anyway, the river would have been too much for them. So try out the bridge we did and determined that it still had enough strength to carry our heaviest tanks. Thank Heavens for conservative French design. The only other bridge that we could have crossed on had been destroyed. I was to find out later that neither at this time nor for days later, was there a single piece of hasty bridging equipment available in the whole Seventh Army, not even an assault boat! And here we were entering the best watered section of Europe! Well, you see, in Africa and Italy the engineers never used assault boats, rafting material and the like, so they were deleted from the tables by the planners.

Squadron and Force CP opened at Oraison. Radio contact was good. We were in touch with all elements. A patrol had been sent to Malijai, thence to swing east to join Troop B at Digne. Trouble ahead! Malijai was defended. No parleying this time, and Jerry had armored cars, too. Also, he was more stubborn today. We were now shooting it out.

The platoon that had been sent off to the southwest toward Vinon reported no contact and remained in observation. The troop that had crossed to the west bank of the Durance proceeded to the outskirts at Chateau Arnoux and ran into trouble. The time had come to close the main body into the vicinity of Oraison. This was accomplished with only the mad enthusiasm of the French populace impeding progress. They actually blocked roads and streets showering the troops with fruit, flowers and wine. Discipline as to the latter held and the men were temperate to an exemplary degree.

When I say "shower" in connection with the above I mean just that. The effusive Latin spirit led to action more precipitate than wise. Did you ever try to catch an apple tossed to you as you drove by at even the moderate pace of fifteen miles an hour? Or did you ever catch a tomato square in the face doing ditto?

These pleasant demonstrations added up to a costly delay. Some vehicles still were on the road when planes came overhead. We could see they were ours—two of them—and we could hear them, too. There was an air-ground liaison team, radio and all, with us. We could hear the pilots talking to each other when they spotted our vehicles. Unfortunately, and tragically, our ground-air liaison transmitter proved to be dead—we could hear but could not talk. The pilots were a glib pair and one was for peeling off immediately. The other said he couldn't see the markings and maybe they were American trucks. And in vain the frantic operator shouted into his set. Yellow smoke went out—but went unseen. The pair in the air decided to drop their belly tanks and if the column scattered it must needs be German. Rather naive reasoning and of course the column took to the fields. And down came the planes. Score: three vehicles and thirteen good American youths.

But what about our three little wars with the enemy? Digne was going again but still tough. Prisoners had been taken, including the divisional area commander—a mere brigadier general. We were slipping; by this time yesterday we had a lieutenant general complete with staff. However stout the resistance, small arms and machine guns together with an abundance of grenades was all the enemy was showing. Grenades thrown from upper floor windows somewhat restrict the effectiveness

of light armor. Put yourself in a sardine can and close the lid and see how it is for yourself. The platoon at Malijai had knocked out the German scout cars, cleared the south bank of the River Bleone, which flows into the Durance at Malijai, and prevented the Germans from blowing the bridge, but the enemy fire was too hot to permit a crossing. The Germans had dug in on the upper slopes of the hill that rose above Malijai and more power was needed there as at Digne. The fight at Chateau Arnoux had reached the parley stage.

I thereupon picked up a company of medium tanks and a rifle company from the infantry battalion and sent them off under the infantry battalion executive to clean up Malijai, then swing east and attack Digne from the west and north in conjunction with Troop B, already there and fighting in from the south. Malijai folded up on sight of the Shermans with many Germans taking to the hills. Those who were blasted out of their positions were left to the Maquis who drove into the brush like bird dogs. A small German group with two vehicles retreated on Digne. There was a large ammunition dump between Malijai and Digne and this the Germans blew while their own troops were passing —fortunately before our column had caught up, they being slower as they checked the road for mines and traps.

The big tanks reached Digne, formed up for an attack, and the infantry deployed with them. Before this force fired a shot white flags went up. Once more the all wise German warrior showed his respect for overwhelming power and this small group of attackers had over six hundred prisoners on its hands. These the French got without strings. Order was restored, troops fed, vehicles serviced and the job done. Back came this little band of warriors to the fold. Our losses for the day in this action were two slightly wounded. No vehicles were disabled.

This action across the river at Chateau Arnoux required a little shelling but the finale was SOP. Score: 150 Wehrmacht. These we had on the usual terms and evacuated them on the supply trucks. Troop A continued on and reached Sisteron—our goal for the moment—at six of a gorgeous late summer evening. Patrols and outposts were set. Troop C fanned out to the north and northwest, covering us from Banon and St. Etienne-les-Orgues.

The fate of Digne having been settled, the remaining elements of the Force moved from Oraison to Sisteron with all groups not on outpost or patrol ordered to rejoin there as well. It is always a relief to get the tag ends in and count the chickens. Dispersal is essential on this type of mission but there is always a sense of relief when dispersed units "home."

I had all my units within my communication net but still was lost from Corps. What was worse, we had run off our maps! Army didn't count on movement, at least in this direction and this fast, and sheets for farther on, to the North or West, just didn't exist when we started off. There were a few small scale maps and some road maps (thank you, M. Michelin) and these must suffice.

Just before dusk, August 19, a liaison plane came in and landed. It was our plane from Corps—the first seen of it in two days. I thoroughly expected some instructions and, most of all, maps. It will be recalled that my orders were to proceed to Sisteron and from there be prepared to move either to the west or north. Well, here I was and every one was raring to go. The air courier had a note for me from General Truscott, written the night before, apparently after my courier had reached Corps, but of this no mention was made. Truscott had the impression I intended to by-pass Digne. Well, Digne was in the bag but I could not tell him, as much as I wanted. I had no communications yet. I kept the plane with me overnight for I might have use for it in the morning.

For security of our line of communication I depended on the Maquis, and my group from Army who were Maquis "specialists" were on the jump morning, noon and night. How effective my L of C defense would have been I do not know. I am thankful it was never put to test. But I could afford no other and our supply elements reported no friendly troops following.

An outstanding individual in the Force was Major James G. Hattox, the supply officer. For two days he worked miracles and for days to come he would continue accomplishing feats. I do not think he ever slept. Even at Sisteron, 90 miles from our jump-off, we were 125 miles from the dumps and Hattox was on the road continuously. He secured one of the two decorations I was able to secure for members of the Force. The other was awarded an officer who under fire and with extreme danger to himself rescued a wounded soldier from an exposed position.

The Reconnaissance Squadron was now a veteran unit and I doubt if any other unit of its type found a job better suited to its organization and equipment than the mission in hand. This is what Reconnaissance Squadrons were designed for and for this they were a sound unit. The 117th from the beginning functioned perfectly in communications and to me this was ninety per cent of the problem. They were perfect now in the technique of reconnaissance and they certainly could carry on persuasive conversation! Their personnel was largely still of the old swank Essex Troop of the New Jersey National Guard and was plenty courageous and daring. And, too, they had learned to live in the field. It was on Saturday that we reached Sisteron. While Headquarters went about the details of outposts, patrols, supply, prisoner evacuation, checking the town and communications and establishing contact with the Maquis—the Headquarters cooks were at their task. It was late before we could break away for dinner—eleven o'clock as I now recall, but what a meal! We started off with a fine French soup, the contribution of the family on whose estate we set up. Then came fried chicken, grand french fired potatoes, hot biscuits, a gorgeous salad, crepe souzette, and coffee. Brandy and

superb Chateau Yquem by courtesy of General Neurling, late of the LXII German Army Corps. The wife and daughter of the estate joined us. These brave ladies were running the farm as the husband-father was absent in Germany. So many times we encountered this situation. Sometimes the absent one had become a prisoner of war in 1940, sometimes it had been a mere case of kidnapping or impressment during the intervening years. I would like someday to tour that beautiful country and revisit the, I hope, reunited families who befriended us and so many of our aviators who had been forced to land here before liberation.

We began to pick up these stranded flyers about this time and it has always been a regret that we could not have done more for them. The press of getting on ahead and maintaining the integrity of the Force was paramount and consumed our every thought and our full time and energy. We could feed these lads, however, and evacuate them, but that was about all. On the whole, the men were in good condition, the French having done a splendid job caring for and protecting them. As for the French themselves, in this section they were well nourished and reasonably well clothed but distraught with anguish, both personal and national.

Our second night in turn was quiet. Our high powered radio from Corps arrived and we were in contact —and I was reporting every two hours. The traffic was all one way, except for the message that told me some of my patrols yesterday morning had been overly cautious. The aviator who made this report was the one who had just arrived and when I showed him this message he was very sheepish and full of stammers. I let it go at that. He was an intelligent young man and one lesson was enough.

I was desperate for instructions. It might be disastrous for a force such as mine to just sit, deep in enemy territory. I turned in after midnight without receiving the message I thought must come at any moment. Information of enemy dispositions kept building up. There was an outpost south of Grenoble. There was a mobile force in or about Grenoble. There was a large garrison —"many hundred," in Gap. Which way was I to go? I wanted to get there.

Before turning in I made arrangements for my operations officer, Major Kermit R. Hansen of Omaha, to take off at first light, shortly after five, in the liaison plane for Corps, if by that time no word had come as to our future movements. Promptly at five the efficient and dependable Hansen woke me and told me nothing had come in from Corps. He and my aviator friend were off in a jiffy. I figured that with good luck Hansen could be back from Corps by ten but evaluating all factors involving travel and a Corps Headquarters, I really did not expect him back until noon. However, I did anticipate that his visit might produce radio orders that would reach me sooner.

In the meantime, orders or no orders, there was work to be done. The artillery cub spotted some German horse-drawn vehicles and a marching column, moving southward a few kilometers below Grenoble. Our maps, such as they were showed difficult country between Aspres, some forty miles north of Sisteron, and Grenoble. Certainly the pass through the mountains was not to be given to German arms merely through inaction and want of orders. I therefore gave instructions to extend our outpost line to Col de la Croix Haute on the Mountain Road between Aspres and Grenoble and took provision to make this outpost a good strong one including infantry and artillery. We gained the pass long before the Germans approached it, and by armored patrols kept the enemy close to Grenoble. The country was so rough and mountainous that vehicular movement was confined to roads. The enemy outpost was located and routes reconnoitered which would have permitted the infantry to have taken the position from the rear. We were at the gates of Grenoble and had the plan set to crash the gate.

Ten o'clock passed; noon passed, and still neither radio from Corps nor Hansen. In the meantime, the situation in the vicinity of Gap needed attention. To be taken by surprise is as unpardonable as is the sin of passing opportunity for initiative to the enemy. The adage of my old division commander and dear friend, Charles W. (Doc) Ryder, is sound; "No Man's Land is our Land." We knew Gap was outposted and we knew there was a sizable German garrison in the town. We knew also that the chances were very strong that the Germans in Gap still were in ignorance of our proximity. At least they had apparently sent out neither patrols nor agents. The Maquis were all ears now—and so were our men. Information of any movement came quickly to me.

Under these circumstances I decided to send a strong patrol towards Gap "to protect the right flank of the Force." Aside from its garrison, Gap was critical to us in view of the network of roads that converged there. The patrol was built around Troop A and was the miniature of an armored division. Early in the afternoon the outpost position was located and successfully overrun. The Germans were caught flat footed and surrendered without firing a shot as the light tanks crashed across the trenches. Apparently there was no communication between the outpost and the garrison and the latter remained undisturbed in its Sunday afternoon's leisure.

The attacking force quickly and quietly was moved into position to assault the town. Gap is quite a sizable town surrounded by hills. Even with partisan support a fight in the town would be long and costly and an ordeal for the civilians. Captain Brown once more took it upon himself to try his hand at talking and drove in a jeep to the German Barracks. He explained to the commandant that a superior armored force was prepared to attack, and furthermore sixty Flying Fortresses were gassed and bombed up to hit the town on call! The Germans again showed their fear of the Maquis and wanted to haggle and bargain, of which Brown would have none. He broke off negotiations,

withdrew a short distance, and called for fire. By arrangement, forty rounds of 105 HE landed in the barracks area in less time than it takes to tell. That was enough. White flags appeared all over. Brown went in and accepted the surrender—and then pandemonium broke. The French were hysterical.

The denouement of this happened without my knowledge. I maintained headquarters back in Sisteron waiting for a radio from Corps or at least Hansen's return. No radio came, ten o'clock came, twelve o'clock came, two o'clock came. We worked Corps on the radio and asked if Hansen had arrived. I never did get a reply to that query. Word came in from the Gap force that the outpost had been overrun and that the elements were deploying to take the town—and then silence from there. I alerted the remainder (and by now minor element) of the Force to be prepared to move to Aspres-sur-Buech and took off for Gap myself.

If we were to go north, I would be that much farther along. If I were to go west into the Rhone, we had now determined that the only practicable route was eastward from Aspres. Further, through our supply grapevine we had a rumor that part of the 36th Division was beginning to move up behind us, so therefore a move to Aspres seemed the play.

I could not account for Hansen's failure to return. I feared that the plane had crashed. Leaving the CP en route to Gap I received confirmation of the move of the 36th. On the road I met the Assistant Division Commander, Brigadier General Robert I. Stack, who was in an uproar. On the basis of the report I had had via my grapevine I had sent back MPs to hold any northbound traffic other than Force traffic at a certain point until road clearance could be established. Under the existing conditions I had to have freedom of movement on the roads. Two columns do not mix well, especially when one is armor. General Stack was terribly upset that his column had been held up. His column was some six jeeps of staff, but I was greatly pleased to hear that a combat team was following and would close in Sisteron that night. This was the most welcome, in fact the only, news of our side that I had had in days.

I explained the situation to Stack and asked him what his orders were. "To go to Grenoble," he said. I explained my predicament as to absence of orders. I told Stack I envied him the definiteness of his mission. I could not account for his having received definite instruction hours ago while I who was directly under Corps was scurrying about on my own rather than sit and let trouble brew. I was holding the bag.

Rushing off towards Aspres and Gap, I was soon passed by an L-5, our liaison plane. I could not see the faces but Hansen spotted me on the road and set down in the next field ahead. Was this a relief! But he had no mission for us.

Shortly after this my radio picked up a report from Gap. The town had capitulated and we bagged 1500 supermen. Under the surrender, the German commander was obliged to take parties to all outposts and deliver them. This he did. Reaching Aspres I turned Hansen loose with instructions to set up a CP there and move the element of the force still at Sisteron on up to Aspres. Oh yes, the engineers were now with us, too.

Despite my order to proceed to Sisteron and there await further orders, I had my force more dispersed now than it ever had been during the previous two days of the campaign. However, I believe it would have been unpardonable to have left the Col de la Croix Haute to the Germans for the taking, and, equally, it would have been foolhardy to have let word slip into the Germans in Gap so that they could organize themselves. If this were unsatisfactory to Corps, I was prepared to take the censure.

When I reached Gap, I saw immediately why the radio had remained silent. The attacking force was swamped and beside itself organizing the prisoners and extricating itself from the population, which literally had gone mad. I got more infantry in as quickly as I could. By midnight order was restored and our outposts beyond Gap had been established with dependable communications functioning all around.

Earlier in the day I had received a French officer, a Colonel Saint Savour at my CP at Sisteron. Officers of the old French Army were coming in now and the assistance of these trained officers was invaluable. This same officer came to my CP at Aspres late this same night and, assuming a continued advance to the North, he made all advance arrangements through the Maquis underground. He also took over Gap from me, and largely through his personal effort, order was reestablished. It was not our function or mission to keep order in France, but for security and for free movement we were much better off that way.

My French colonel was thoroughly familiar with the country and very much concerned over the Col Bayard north of Gap. We had not pushed out that far after taking Gap. I really felt that this was sound military advice that my colonel was giving me, though I hated to disperse any part of my small force that much. There was the off chance too that my friend might be just a bit on the side of shadow seeing. As previously stated, if one were to act on all French information at this time, one would run his legs off in twenty directions at once. Nothing, however, could be done at this hour of darkness, as it now was past eleven, but I did send for Colonel Hodge and instruct him to patrol to the pass as soon as it was light enough to see. I turned in. Were we secure? Whither would we move? What about the pass north of Gap? Was the enemy reinforcing south of Grenoble? The last radio check reported all well. With that, and a new day showing on the calendar, I turned in.

About four o'clock in the morning Colonel Theodore J. Conway of VI Corps Headquarters arrived with General Truscott's instructions. Go west, young man, go west! It was to be the heights above Montelimar after all, and at this moment of dispersion,

I was to change direction. What is more I was to be on my objective before dark that night! I was better poised to continue north but that was my fault. I had made my dispositions for valid reasons and now I must work myself out of the existing situation and roll into the next. Grenoble dangled on a thread. Yet it was not to be ours. The little bug in the mission was that my objective was 90 miles from Aspres—quite a day's run even if we were all together! However, by this time we were a team, not merely an aggregation of units. Despite my bi-hourly reports, Corps had no knowledge of my dispositions or the local situation when the decision was made to head me for Montelimar.

My outposts to the north should not be abandoned. If my French colonel was correct in his estimate that Col Bayard (Bayard Pass) was the key terrain of the whole area it should be seized and held forthwith. Discussing the matter with my Corps representative, we evolved a plan of action. The 36th must relieve me towards Grenoble at the earliest possible moment. I would start at daylight with the bulk of the force and the outpost elements would follow as quickly as relieved. My position with respect to issuing orders as a Corps representative might be questioned. It was true that my normal assignment as assistant to the Corps Commander would have given me authority under the circumstances to issue orders in the name of the Corps Commander but in my actual capacity at the moment as a unit commander I hesitated to barge in on Stack with specific orders, especially since he apparently had definite instructions from somewhere to get on to Grenoble. However, I felt at perfect liberty to outline a plan for Colonel Conway to transmit should he, in his latest knowledge of the Corps Commander's plan, feel that it was consistent with the over-all scheme of things. This proved to be the case. While the Force headquarters turned to getting out orders for the morrow, Conway turned back to Sisteron and then to Corps. At Sisteron he passed orders in the name of the Corps Commander to Stack to relieve my outposts without delay.

For three successive days we had made forty-five miles per day and on this, the fourth day, we were to make 90 miles and end up astride the enemy's main axis at a point a hundred miles or more behind the front. Fortunately Hattox had us well supplied with fuel now and I had a good reserve—ample to carry the Force 90 miles and still give a reasonable combat reserve. We were building up on ammunition as the heavy expenditures at Digne had more than been replaced.

It was necessary to reorient the Maquis, and my French colonel was available immediately, having bedded down at our CP at my request. It would be daylight before we could move and we needed all the daylight possible. Would that the days were longer! At first light the point was on the move and thus, another day. Hardly had the movement to the west gotten under way when the Gap command reported that patrols had observed enemy movement through the Col Bayard. Three scout cars and either a tank or self propelled gun were reported as observed. And here I was committed to a move to the west, with 1500 prisoners of war in Gap in our technical custody, but actually in the hands of the French. An attack on Gap at this time would have been a spark in a powder keg. I therefore immediately ordered artillery, tank destroyers and cavalry to advance, seize and defend Col Bayard. Maquis provided the infantry cover. With heavy armor by his side, a Maquis was worth a lot. No sign of the 36th and they could not be raised in our radio net. I hoped for an early relief so that I could arrive on my objective with my full strength. But I was not sanguine.

The enemy force north of Gap developed into nothing more than a patrol and was driven back vigorously and successfully. Whether more enemy would have followed this single patrol had we reacted with less show of force, I do not know.

The movement towards Montelimar continued. The route lay over a formidable mountain range with a twisty road cut into the side of the cliffs. Movement off the road would have been impossible. Our path could have been blocked in any one of scores of places, but no enemy action developed, nor had demolitions been executed. Whether we have the Maquis to thank for this free open road I do not know, but open it was. As soon as the point reached the summit I closed out the headquarters at Aspres and leapfrogged on to Die. I was horror-struck at the grade and nature of the road but all elements had made excellent time and none of the heavy vehicles had succumbed.

At this point it is well to comment on the performance of our vehicles. Several of the light tanks had fallen by the wayside and a few of the armored cars were out of action. The heavy tanks were doing well but the diesel driven tank destroyers were giving trouble. The artillery brought through every single one of its self-propelled guns and that in itself was an achievement for this splendid battalion. The ordnance company assigned to the Force followed our paths closely, and sent disabled vehicles on up to us remarkably quickly. This rat race was a test for the mechanical sturdiness of American armor and the efficiency of our mobile maintenance. Both came through 100% plus. Though thin of skin and lightly gunned, our tanks were good travellers.

By midafternoon Troop B, which led the advance, reached the high ground overlooking Highway 7 on the east bank of the Rhone. It was in this area that the fight now known as the Battle of Montelimar was to develop as the U.S. Seventh Army cut the line of retreat of the German Nineteenth Army. The location was well suited for the action. Here two tributaries enter the Rhone River from the east, the Drome River on the north and the Roubion on the south, forming two sides of a battle square with the Rhone forming the west side and the foothills of the French Alps on the east, from which we were entering. In the southeast corner is Montelimar, the chief communications center of the

area, and from there Highway 7 and the railroad, the German line of retreat, runs north through the narrow gorge at Coucourde to Loriol near the influx of the Rhone and the Drome. The eastern points of the square are Crest on the Drome and Charols on the Roubion. In the hills near the center the road junction of Marsanne is connected with Highway 7 by Condillac Pass. Troop B established headquarters here near Marsanne and swept two platoons south to the outskirts of Montelimar. Thus the screen through the villages of Savasse–Condillac–Mirmande was forming, behind which the rest of the force was moving. Below the villages on Highway 7 German traffic was heavy and the light tanks and armored cars immediately went into action. The confusion of the enemy as well as the destruction inflicted was indescribable. Even German planes taking off from the nearby airfield were taken under fire. Shortly after dark the enemy counterattacked in force and Troop B was forced to draw back and consolidate, but not before it had done mortal damage.

The next troop in the column, Troop C, was pushed straight through Crest along the north bank of the Drome. This column reached the bridge near the mouth of the river, to find it blown, but observed an enemy column crossing by ford lower down near the confluence of the Drome and Rhone. One platoon drove tc the crossing, took the column under fire, destroyed the vehicles and blocked the ford. Another platoon moved north on the main highway and broke into still another enemy column. Threading its way through the German trucks and with all guns firing, this platoon destroyed and set afire over fifty vehicles. What the German personnel losses were was never established. Here again the enemy reacted at nightfall and it was necessary to concentrate the Troop for effective outpost duty in protecting our right flank.

The bulk of the infantry battalion, the artillery and the engineers followed closely in column and were placed in position to cover the Condillac Pass, west of Marsanne. This was my point of strength and through this pass I expected to cut the main highway. That first night we did cut the road but were unable to defend the block. After a bitter fight we fell back onto the pass, but the enemy was held at bay. This seesaw continued for two days. We just did not have the strength to force and hold and we were too tenacious to be driven away from the high ground above the road, which thus was always under our aimed fire.

Dark was closing in on us this fourth day of our mission, and with darkness there was no respite in our activity. On the move up and on arrival at the Marsanne position, my own small staff was completely occupied. As for myself, I was concerned over the infantry dispositions at Condillac and the plans there for the night. The headquarters commandant of the Reconnaissance Squadron had shown extreme judgment in picking out CP's to date so I instructed the Squadron commander to have selected a position for the night. When time finally came for me to "home" to the CP, my heart sank and sank as I drove on in the dark and followed my direction by the stars. As my heart went down, my blood pressure went up. Reaching the CP I asked the squadron executive, the senior present, how long it would take to move the CP. "Forty-five minutes, Sir," he replied. "You'll be out of here in ten" said I, and out they were. The lad who selected the CP had had a better sense of comfort and the aesthetic than he had tactical judgment. He had picked out for our headquarters an ideal position for a key element in our outpost system!

Troop A of the 117th closed in on us from Gap that night but the tanks and tank destroyers had been so delayed by the slowness of the 36th making the reliefs that they did not make it—and when they did, it was almost too late.

I still was shy some of my precious few infantry, a company that I left behind in the Gap area. There being no engineer work in hand other than road demolitions which the riflemen themselves would handle, I attached the engineer company that night to the infantry battalion. This was the first experience these men had had near or under fire and it was indeed their first exposure to enemy contact. It was a sad night for them. As a result of their own buck fever they shot themselves up and suffered more casualties than the infantry. However, as American troops will, the unit survived to eventually accomplish first rate work as infantrymen.

In a note I received from General Truscott, in addition to giving me my mission of seizing the high ground north of Montelimar, he told me that my action was to be such as to give the impression to the Germans that an armored division, or at least a major portion of an armored division, was operating in their rear. This I believe I did for in the next days the enemy reaction was fierce and determined. Just how to evaluate actual relative strength to that of an armored division calls for many processes of arithmetic—ratio of men, ratio of tanks, ratio of guns, and ratio of guns to men to tanks. Off-hand I would say I had available to me from ¼ to ⅓ of the fighting strength of an armored division.

There is a vast difference between getting an advance guard of light, fast-moving armor into an enemy stronghold, and in having a stranglehold on that enemy. Our light force had gotten on to its position and was dishing out destruction by the barrel. But for how long? The Third Army learned too in its break-through from Normandy that it was one thing to get a reconnaissance platoon into the outskirts of Brest, and another thing—in that instance, another forty-odd days of hard fighting —to master the enemy force.

The German is a fine soldier. By the time the Americans entered this war he was an experienced veteran. Where there was the will, he reacted quickly, soundly and effectively to an emergency. When he so acted, there was hell to pay. This, many high and intermediate American commanders never knew, appreciated,

or understood. They were too far away from the realities of the battlefield. This in turn is as it should be for had it been otherwise, the *impossible* never would have been demanded—and having been demanded, never would have been achieved by groggy, dazed, hungry and battle weary troops.

If I had had an armored division at the time, I believe the 19th German Army would have been annihilated. Even had the 36th Division swung in behind me rather than continue north to Grenoble the effectiveness of my position would have been enhanced by geometric progress. As it was, the Germans were building up against me faster than were our forces building up. Before the battle was over, some ten days later, the whole of the 36th and part of the 45th Division were pushing at the escape route and still dismounted enemy personnel were escaping. As the main highway became blocked with wreckage and death the Germans took to paths and lanes between the highway and the river and it was humanly impossible to block movement by day, much less by night. But our fire took an appalling toll.

Morning of the fifth day broke and we were still intact. This was to prove a field day for the artillery and a nightmare in broad daylight for the command. Had there been greater infantry strength, a position closer to Montelimar could have been secured and held, but with the force available the best tactical distribution seemed to be that which we had. Our small ground-holding element, the essential doughboy, was best used in the positions covering the Condillac Pass. The outposts of the cavalry were well located as points from which patrols could operate and from which heavier elements could function to deliver direct fire on the visible roads. Protection of the left flank along the Roubion was assigned to the Cavalry. The front was long and it could be covered by patrols only. The force coming in from Gap and the Col de la Croix Haute was directed to Puy St. Martin where, upon arrival, it was to constitute the Force reserve under the command of Lieutenant Colonel Joseph G. Felber, the CO of the 753 Tank Battalion. Our artillery cubs (two now) besides spotting for the guns were keeping an eye to the south to assist the cavalry in watching the long line of the Roubion.

Although we did not hold the main east bank highway along the Rhone during the daylight hours of the 22nd, little lived to escape on that road. The artillery covered the road in the vicinity of Montelimar as well as the streets therein. Tanks, tank destroyers, armored cars, even ground mounted 57's of the infantry were pouring aimed fire at the dense traffic. In addition the 59th Armored Artillery by excellent shooting and good luck bagged several trains and the railway on the east bank was blocked. We never were able to block the west bank road or railway, but touched it up plenty. Even the "flak wagons" with the artillery battalion got in on the shooting.

Among the successful targets of the artillery that first morning were two railway artillery trains. And what a show those trains put on as cars burned and ammunition blew up. I always wanted to see what was left of the tracks where these trains stood but never had the opportunity to satisfy my curiosity.

The Germans were probing everywhere. Early in the afternoon we got a real scare. Five Mark V tanks supported by panzer grenadiers succeeded in crossing the Roubion near Cleon. Troop A fought skillfully, knocking out several of the supporting vehicles, but became cut off and surrounded. The Germans even worked into Puy St. Martin, where Felber had his headquarters. This was the time and place to use my reserve and, anticipating enemy power in this area, this was the location I had picked out from which the reserve was to operate. But the slowness of the relief at Gap had delayed this vital element of the command. It still was on the road. The tank destroyers that Felber had did excellent work and stemmed the advance. More power was needed. One platoon of Troop A still was cut off and had lost two armored cars and three jeeps. Due to the hilly nature of the country we could not raise our advancing column by radio. Its commanding officer had driven on ahead and was at the CP. Now the Germans were between us and his troops. He estimated the column could not be more than thirty minutes from the point where they would contact the enemy. Forewarned would be forearmed. Our only chance of communication was a dropped message from a cub. An artillery plane was called in, given the message, dropped it, and our rescue column arrived for a movie finish. The German tanks which had crossed the Roubion were destroyed, the infantry were driven back and on the south bank several fires burned merrily where our guns had found trucks and light vehicles. It was a good honest fight. The reserve had arrived in the nick of time. Enemy identifications made in this encounter showed we were up against the 11th Panzer Division. As "Sally and George," the German broadcasters of Anzio days, would say, "Danger Ahead!" The 11th proved to be very tough cookies here and on several later occasions on the VI Corps route to Germany.

When this situation was in hand I sent for my artillery commander to determine his ammunition status. He quoted me a stock of around sixty rounds per gun. This was much lower than had been indicated to me earlier. I thereupon set a reserve of fifty rounds per gun to be used on my clearance only. Just to add to my sense of security, half an hour later McLean, the artillery commander, reappeared with the humble information that a gun by gun check showed 25 rounds per gun on hand! Fire had ceased! The 105's of the 117th were short too. Already Hattox was concentrating on ammunition, but how soon would it arrive?

Closer to Montelimar Troop B had had a lively day of it with German patrols poking at it incessantly. All were turned back without too much penetration. Some unaccompanied enemy tanks broke into the rear areas but no crews survived to return. More 11th Panzer! By

nightfall the sector was still intact, but what of the morrow?

Troop C, protecting the north flank along the Drome now had the complete Assault Gun Troop with it and enjoyed the shoot of the day. The 105's were delivering aimed fire at enemy columns west of Loriol and at a range of 2500 yards. Firing high explosive and phosphorus these guns accounted for hundreds of vehicles setting them ablaze and sending occupants scurrying. The armored cars of the troop were closer in and further harried the dismounted enemy with machine-gun fire. That night heavy enemy movement could be heard. There could be no artillery firing until ammunition was up again. During the night when the resupply finally arrived the artillery interdicted the ford across the Drome and other key points. Numerous fires indicated the concentrations were getting results.

The night was reasonably quiet and nothing transpired to lead to a crisis. By now, however, the troops were tiring. This was the 22d of August, the eighth day of continuous action for the troops. True, much of the time had been mere riding. There was the exhilaration of accomplishment and advance which serves as a stimulant of incomparable efficacy on tired soldiers. Troops can be worn to a bone by a prolonged, withering fight. The long, gaunt faces will appear. The eyes will begin to pop. But make a breakthrough and sprint and the most tired will be in the van. It is a remarkable human reaction.

Be that as it may, the men were beginning to show the effects of the strain. The morale was high. There never was a thought of giving an inch of ground. Had not every enemy thrust been turned back? Tails were in the air. Then too, the "high command" was feeling better. The whole Force was in hand. Thanks to the artillery battalion we had wire telephone connection to all major units. Further, word had come that on the morrow I would receive a regiment of the 36th. Somehow or other this regiment, the 141st Infantry, was in Grenoble and was doubling back to me immediately.

Incidentally, the trip of 141st Regiment from Grenoble to Marsanne is one of those things that can happen in war. The regiment's route practically paralleled the route of the retreating Germans and passed within gun shot of an airfield which was well protected by small caliber antiaircraft guns. For two days our patrols had been dueling with this field, and with noteworthy success! Ignorance is bliss and down came the 36th convoy into our lines without an incident.

We were set for trouble the next day. I expected an attack in any one of my critical outpost positions, if not in all three. We knew the enemy was very interested in our extreme left flank. If he could break through there we were cut off. The Condillac sector still was a hot spot but oddly enough the Montelimar corner seemed quiet. After Troop C's execution yesterday at Loriol I expected trouble there.

The first action of the day came to our left flank in the vicinity of Cleon. Troop A now had attached to it about 200 Maquis. This is the sector in which the 11th Panzers made their first attack. Today we were better organized and had our full force. The attack was spotted before it reached the Roubion and broken up somewhat by artillery fire. What was left of the attack was broken up by our tanks and tank destroyers. It was a short fight, good communications were in, and the Panzers took a shellacking.

While this fight was brewing, Colonel John W. Harmony of the 141st Infantry arrived and reported his column approaching Crest. I immediately gave him his dispositions. I wanted extra strength on the north flank and instructed him to attach his cannon and anti-tank companies to the Drome river force and sent a field officer to command this sector. One rifle battalion I directed to seize and hold the high ground south of Condillac and physically block the main highway. With this accomplished, the next task for the regiment was to launch a battalion attack to drive the German defenses back into Montelimar and occupy commanding ground immediately covering the town and its northern exits.

During the morning the 36th Division Headquarters also arrived. This very situation had been envisioned by General Truscott before I left the beachhead and in the event things worked out along these lines, I would pass under the command of the 36th. Major General John E. Dahlquist, the commander of the 36th arrived with just such instructions. However, he asked me to continue direction of the action until later in the day while he was absorbing the situation and getting organized. I explained my plan and he asked for no changes.

Late in the afternoon, after the Division had taken over, I made a round of the battalions and watched closely the efforts of the battalion attempting to advance on Montelimar. I had been misled as to the location of the battalion, and found the attack was poorly organized and poorly led. It looked to me then, and later proved to be a fact, that our attack had run head on into a German advance in this sector. The situation was badly involved, with the Germans in my judgment having the better of it. The 141st had not yet reached the cavalry outpost line and this had been cut through but the platoons were intact and fighting well. My immediate recommendation to General Dahlquist was that the attack be stopped, the infantry reorganize and dig in on their position, and the cavalry screen be withdrawn through the infantry. This he approved.

The real story of the Force ends with the assumption of command by the 36th Division. The mission of the command was to advance inland and then to seize and hold the high ground north of Montelimar. This the Force did. The morning after the 36th took command, General Dahlquist dissolved the Force. The units as such went back to direct Division control. However, later the same day, the Corps commander directed that the Group be reconstituted and in a fashion it was. The original units did not come back, nor could it be an-

ticipated from day to day what units would constitute the Force. It was given missions that kept it on the move, and at times new missions were assigned before those previously assigned could be entered upon. However, there was plenty of action and some effective fighting.

The Provisional Armored Group played a telling role in the VI Corps advance northward from its Riviera landing. It is a pity it could not have been larger, or, failing that, that it was not reinforced faster. The former it could not have been. Resources available did not permit. As to the latter, that may have been just another of those innumerable "ifs" of war and history.

It is appreciated readily that best results are obtained when units have been trained together in the tactical entity in which they are to fight. Any sportsman realizes that a team of all-stars thrown together for the first time is far from an effective game-winning aggregation. Another factor to consider in this operation of the Provisional Armored Group is the fact that not only were the supply resources of the group itself sketchy at the best, but the operation was launched on the third day after landing on a hostile shore, when beachhead supply was on a hand-to-mouth basis.

This small, hard-hitting, fast-moving unit had advanced 235 miles in four days. The total advances of patrols and subsidiary forces would be several times that. Thousands of square miles had been combed and cleared. A Corps Headquarters that first had been the goal and hope of an airborne division and later the 36th Division had been snatched after the others had had their chance. The number of prisoners captured exceeded the strength of the Group, including quartermasters, ordnance, mechanics, and medicos. The count on vehicles destroyed gives each man credit for better than one and a fraction. General Truscott visualized the tactical possibility of such a Group. It was his sound decision that sent it into the valley of the Rhone instead of on to Grenoble for a hollow but sweet-sounding achievement. It was cavalryman Truscott who stipulated that the Group would be built around the Corps Reconnaissance Squadron—the 117th.

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ARMOR IN THE BULGE

by Lieutenant Colonel E. A. Trahan

2d Armored Division In The Ardennes Counteroffensive

PART TWO: REDUCING THE SALIENT

WITH the new year, the 2nd Armored Division began the second phase of its operations in the Battle of the Bulge. The contrast between these two phases—the action against the spearhead of the offensive, ending in the Celles pocket, and the attack to Houffalize—was striking. The two actions formed an example of the widely different conditions under which armor operated in the Ardennes. Celles had been a battle of movement, while the attack to Houffalize was a series of punishing frontal attacks, with little or no room for maneuver; Celles was fought in relatively open, gently rolling country, in clear weather with air support, while Houffalize was fought in broken, tortuous, heavily wooded country, under miserable conditions of heavy snow, ice, fog, glazed roads and overcast skies which precluded air support; Celles was a meeting engagement, while Houffalize was an attack against a determined enemy occupying well prepared defensive positions. The contrast becomes even more marked when we realize that Celles lasted but five days, while Houffalize, the division objective in this second phase, was not entered until thirteen days after the attack began; the distance covered in the attack in each case was almost the same.

On New Year's Day, 1945, the division received orders to move to a new assembly area, in the vicinity of Grandmenil, and northeast of Hotton, in preparation for a new attack. The move was begun early on the 2nd, and although the distance covered was less than twenty miles, all of the division elements were not in the new area until late on the 3rd; even then vehicles littered the route of march and had to be towed in or repaired. This delay was due almost entirely to the condition of the roads over which the move was made, and to the weather. The roads were typical of the Ardennes; narrow, high crowned, paved in most instances, winding sharply through the hills, with many steep grades, and with innumerable sharp turns through the many small villages and towns. Moving the heavy, cumbersome equipment of the division over this road net was difficult in any circumstances, but in this instance it had snowed, then rained; the temperature was now below freezing, and the brick paved roads were everywhere covered with a thick coating of ice. On this slippery surface the vehicles floundered, ending up in the ditch at almost every turn. The engineer battalion improved the roads wherever it could, and spread all of the sand it could procure, but even this was not enough. The tanks and tank destroyers equipped with steel tracks were especially helpless, for as soon as the delicate balance which they maintained in moving, by straddling the crown of the road with mathematical exactitude, was disturbed by having to move to the side to pass an obstacle or another vehicle, they invariably slid into the ditch, breaking and snarling the telephone lines laid there, and helpless to regain the road. There they remained until a heavy wrecker arrived to pull them out. It was eventually found necessary to replace all steel tracks in the division with rubber, which were more suited to operation on ice. This was done during the next two weeks, by pulling tanks by twos and threes out of the battle, changing the tracks, then sending them back to the lines.

Plan for the Attack

As the division assembled, plans went ahead for the attack. The SHAEF objective was to pinch off the neck of the Bulge by attacking from the north and south simultaneously, toward Houffalize. At the time, fierce fighting still raged around encircled Bastogne, and the German attacks against the heroically defended town did not cease until January 9th, ten days later. 3rd Army was to make the attack from the south, while 1st Army made the northern attack. VII Corps, composed of the 2nd and 3rd Armored Divisions and the 83rd and 84th Infantry Divisions, was to make the main effort of 1st Army, supported by the XVIII Airborne Corps on the east and the XXX British Corps, which had taken over the lines from the Meuse to Marche, on the west, both of which were to make limited attacks to assist VII Corps. The VII Corps attack was to be made with the 2nd Armored and the 84th Divisions on the right and the 3rd Armored and the 83rd Divisions on the left, the 2nd Armored having the objective of capturing Houffalize and the 3rd Armored having the objective of closing to a line east from Houffalize. The 2nd Armored and the 84th Infantry Division worked together intimately throughout the operation, units of the

84th being attached to the 2nd on several occasions, and the division itself operating in a sector to the right of the 2nd Armored, between it and the Ourthe River, from the 6th of January to the end of the operation.

January 3rd to 6th

The attack of the 2nd Armored Division was launched at 8:30 A.M. on January 3rd, on an eight mile front from Hotton to Grandmenil, with CC"A" on the west and CC"B" on the east. Five task forces abreast pushed through the lines of the 75th Infantry Division, in weather so foul that a postponement of the attack was for some time considered. The temperature was far below freezing; snow had fallen steadily for two days, and continued throughout the day, until drifts were sometimes waist deep. The country became more broken, and the steep, narrow roads, heavily iced, immobilized most of the armor. Fog in the early morning and snow during the day cut visibility to almost zero so that artillery observers were able to function for only one hour during daylight hours. In addition, mine fields, both friendly and enemy, were a constant hazard. In the early days of the battle, American troops had laid mine fields in many areas as they pulled back, with insufficient time in many cases to properly plot or report their location or even existence. The area in which the division attack was launched was one of these, and the advance was slowed due to the necessity of exploring and clearing many spots along the paths of advance. And once the American mines were passed, the German mine fields made their appearance. A particularly troublesome type was the German plastic mine. Undetectable with the mine detectors, and covered with a thick layer of snow and ice, many roads containing this type of mine field were considered safe for days, until the snow and ice layers were worn thin enough by the passage of vehicles to allow detonation of one of the mines. Then the area had to be blocked or bypassed until it could be painstakingly cleared.

In spite of these handicaps, the line had been advanced an average of two thousand yards by dark. CC"A," on the right, attacked with three task forces abreast. The advance was slow but steady until the village of Devantave was reached. There, the enemy launched a counterattack against the advancing CC"A" column at 4:40 P.M. This was beaten off after a bitter fight, and CC"A" consolidated its positions all along the line for the night, the center task force northwest of Devantave, and the other two echeloned to the rear on either side. Early the next morning, the enemy renewed his attempts to stop the CC"A" attack, launching three counterattacks against the most advanced element, the task force at Devantave. The first two were launched in darkness, at 4:50 and 6:15 A.M., and the third at 10:30 A.M. All were repelled with heavy losses to the enemy, one tank being knocked out in the second, and two out of the six taking part in the third suffering the same fate. The CC"A" task force then reorganized, and at 1:30 P.M. launched its own attack against Devantave, through the swirling snow. The enemy reacted fiercely, sacrificing four tanks in an attempt to stop the attack. This was partly successful, the American advance being held in the outskirts of the town, and then falling back a short distance to consolidate positions in the woods west of the town for the night.

The other two task forces of CC"A" were meeting similar resistance to their advance. Enemy counterattacks, road blocks, mine fields, the weather; all contributed to a slow, costly advance for these two forces, who formed the wings of the point at Devantave. On the third day of the attack, January 5th, CC"A" launched another attack on Devantave, but was again unsuccessful. Only on the 6th, after a third attack, was the town occupied and mopping up begun, even as another enemy counterattack to retake it was beaten off. As this was being done, the other two task forces closed in to assist this attack, seizing commanding positions on both sides and southeast of Devantave.

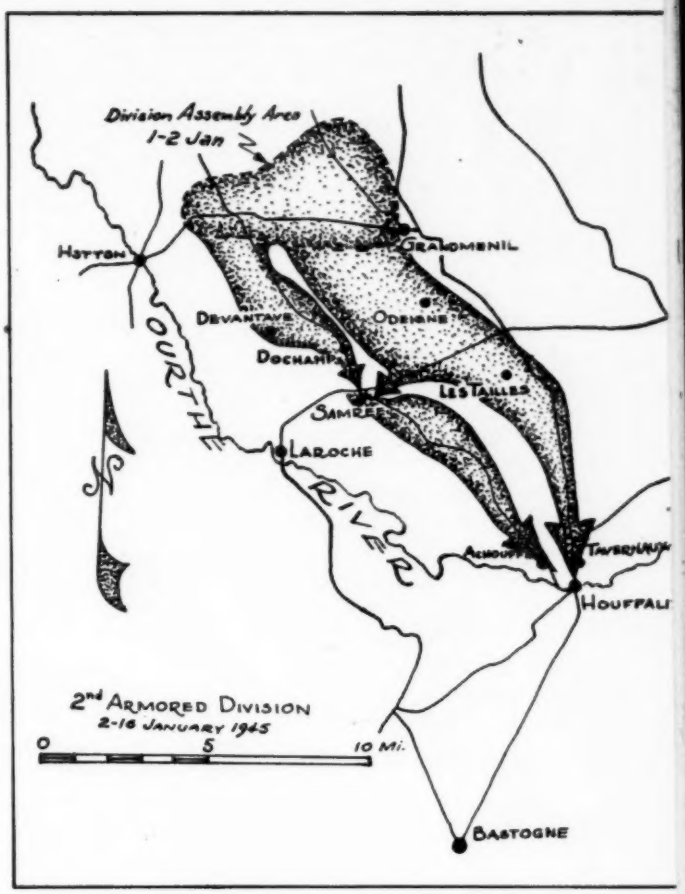
CC"B," meanwhile, was meeting like resistance in its advance. Jumping off at 8:30 A.M. on the 3rd, its two task forces met determined enemy fire which held its advance to about two thousand yards for the day. After a night spent in preparation, the attack was resumed the next morning, again at 8:30, meeting heavy resistance from anti-tank guns, rocket launchers, artillery, nebelwerfers, road blocks and mines, in its advance towards Odeigne and Dochamps. The attack on Odeigne was continued throughout the day and into the night until 9:00, when positions were reached on the north and east edges of the town. The other task force advanced against similar resistance to a position west of the first by dark. The following morning the assault was delayed until 9:00 due to poor visibility. The task force attacking Odeigne advanced on the town from two directions against the determined German resistance. First elements entered the outskirts at 11:20, but resistance was so determined that the fight went on through the afternoon, until by 6:00 all of the town except the south edge had been occupied and consolidated. The Division Reserve, which had in the meantime been attached to the combat command and had relieved the western task force to allow it to revert in turn to division reserve, resumed the attack on Dochamps on the same day. The enemy reaction forced the attackers to a halt about half a mile from the town. During the night, patrols were pushed to within four hundred yards of the enemy positions in the outskirts of the town. During the night, also, the combat command boundary was shifted slightly to the east, placing Dochamps in the sector of CC"A," and allowing the CC"B" western task force to bypass the town and attack to the south on the 7th.

Capture of Samree

On that day CC"B" cut the road running northeast out of Laroche through Samree, at a point south of Odeigne. This was a distinct blow to German opera-

tions, since the road was a vital supply artery for the enemy forces still fighting to the west. The Germans were now in possession of only one good supply road in the sector, running through Houffalize. The eastern task force of CC"B" attacked early in the morning from the vicinity of Odeigne, and by 9:30 had reached its objective, the high ground astride the vital supply artery. The ground was organized, road blocks installed, and the position held until the 12th of January. The western task force attacked to the south, along with a third task force which had been constituted to join in the drive, on the same day, and with the same objective; that of cutting the enemy supply route. This force reached its objective on the next day, January 8th, then turned west to attack the town of Samree. In doing so it ran headlong into the most formidable road block ever encountered by the division. Taking advantage of the weather and terrain, the enemy had felled large trees in profusion across the road in a defile, then had heavily mined and booby trapped them, placed wire and obstacles among the branches, and lastly organized strong positions for defense of the block, employing anti-tank fire, nebelwerfers, artillery, and small arms. CC"B" attacked this position for two days, the enemy repairing the damage done during the day under cover of darkness each night, and it was not until the morning of the third day, January 10th, that the force succeeded, at 9:00, in reducing the last position and resuming its advance.

From the time of its capture of Devantave, on the 6th, to the 10th, CC"A" engaged in a punishing advance on the town of Samree. On the 7th, a task force of the combat command attacked and captured the town of Dochamps, which had been placed in the combat command's sector through the shift of boundaries on the night of the 6th-7th. Then the entire combat command swung south for the capture of Samree. The enemy seemed determined to hold the town, and the fighting in the snow and ice was without quarter. Against this resistance, the combat command gradually advanced, until by the night of the 9th it held positions in a semicircle just north of Samree, poised for the final assault on the town. These had not been gained without cost. In one instance, the Germans had emplaced ten tiger tanks in the edge of the woods bordering a road running north out of Samree, in a narrow gorge. Snow had drifted over them until they were completely camouflaged. They waited quietly, and as the first American tank loomed up out of the fog at point-blank range, a sudden burst of fire destroyed it. Maneuver was impossible in the narrow defile, and every tank that attempted to rush the position was quickly knocked out, despite all of the covering fire that could be brought to bear. It was not until concentrated fire of medium artillery had been placed on the position throughout the night that CC"A" was able to push through the position, the tanks roaring through over the icy road made passable by patrols which had quietly spread cinders and sand into the very heart of the



German position under cover of darkness. Casualties in the division in wounded and sick, the latter due to weather conditions, were high, as were vehicular losses. Included in the casualties was the regimental commander of the combat command's armored regiment, killed in the assault which gained the final positions facing Samree.

On the 10th the entire division concentrated on the assault on Samree. The eastern task force of CC"B" held its positions on the Laroche–Samree road below Odeigne, while the western forces, having overcome the road block east of Samree, joined in the attack on the town. The CC"A" commander, knowing that an attack in daylight across the open terrain just north of Samree would be almost suicidal, ordered his western task force to make an initial assault on the town under cover of darkness. Accordingly, a battalion of tanks launched an attack at 7:30 A.M., over icy roads, in snow and darkness, from its positions northwest of Samree. Some of the tanks slipped off of the road and stalled, but the bulk roared into the town in less than fifteen minutes after jumping off, taking a dazed enemy completely by surprise. The remainder of the task force followed in the growing light, to close with the bewildered Germans engaged in a stiff fire fight with the tanks in the town. The eastern task forces also joined the assault, losing two tanks when they turned over on the steep

icy roads. Each task force pushed a smaller force through the town and established road blocks on the Laroche–Samree road, one east of the town and one west.

The western task force of CC"B" to the east, had meanwhile pivoted to the south and taken up positions southeast of Samree, to prevent any relief of the town by the enemy from the south. The fight in the town itself went on for some time, resistance decreasing as it was mopped up, until by midafternoon Samree was secure. The town had been defended by several battalions of infantry and twenty Mark V tanks. Very few of the infantry escaped, and most of the tanks were knocked out in the fighting, the remainder being captured.

On January 11th, the division paused to gather itself for the final drive to take Houffalize. The day was spent in reorganization and maintenance and repairs, sorely needed by the men and vehicles after nine continuous days of fighting, day and night. Units were reorganized and regrouped, replacements for men and vehicles brought up, and orders issued for the continuation of the attack. The division zone was narrowed, to allow for greater weight in the attack, but the dispositions of the combat commands in relation to each other were not changed.

End of the Bulge

The attack of both combat commands jumped off again at 8:30 A.M. on January 12th. During the first two days resistance was approximately the same as it had been during the first phase of the battle. The division reconnaissance battalion, attached to CC"A" on the right, engaged in a stiff fight to dislodge a German battalion intrenched in the buildings and grounds of a large farm just below Samree. The position was captured during the afternoon of the first day of the attack, with 107 prisoners being taken, including the Battalion Commander and his entire staff. During this same period, the division reserve command, attached to CC"B" and acting as one of its task forces, also captured a German command post. Among the items captured was a sack of American mail, and among the letters in this sack was one, a special delivery, addressed to the Colonel commanding the task force which made the capture!

The attack then settled into a vicious, continuous fight against tenacious rear guard action. The German units, although without hope of keeping their salient into Belgium open, retreated slowly, fighting at every possible position, and only withdrawing after they had exacted as large a toll of American casualties as possible. Even so, the casualties caused by the weather far exceeded the dead and wounded, and continued to mount until the end of the operation. The snow, ice and bitter cold were more formidable enemies than the Germans. If the wounded were not recovered as soon as they were hit, they froze to death almost immediately. Winter clothing was distributed, but the supply fell far short of the actual needs, particularly in the case of footwear. A shoepac was improvised by wrapping several thicknesses of blanket around the foot and then wearing an overshoe over this. But the infantry, operating continuously in the snow, sometimes in foxholes for days without an opportunity for exercise and movement, still suffered heavily from trenchfoot. Camouflage clothing was another problem. The OD uniforms of the soldiers stood out glaringly against the snow, while most of the enemy troops were equipped with white snow uniforms. White sheets and mattress covers were used to overcome this to some extent, but the larger supplies of winter camouflage suits, shipped from the states, did not arrive until later. The tanks were also painted white, to assist in blending them with their background. Hot food was sorely needed in the lines, but under the conditions of the battle it was often impossible to get it up, and emergency rations, sometimes frozen so that they had to be thawed by placing the cans on the exhaust manifold of the vehicles, were the usual fare.

Despite these handicaps, the advance of the division continued for four more days. On the 15th CC"A" reached Achouffe, only fifteen hundred yards from its objective, the Ourthe River, and during the night dispatched patrols to the river. CC"B," on the east, reached the town of Tavernaux late in the afternoon of the same day. Patrols went into Houffalize shortly after dark, returning after midnight to report the town unoccupied.

January 16th, 1945, marked the end of the Bulge. At 9:30 A.M. a patrol from the division reconnaissance battalion (attached to CC"A") which had worked its way down to the Ourthe River just west of Houffalize during the night, discovered a patrol advancing from the south toward them, across the river. The CC"A" patrol held its fire, and as the opposing patrol advanced, they recognized it as American. In a few minutes the two had joined. The southern patrol was from the reconnaissance battalion of the 11th Armored Division, part of Third Army, and the juncture of it with the division patrol was the juncture of First and Third Armies, and the end of the Bulge. CC"B" had in the meantime occupied Houffalize, the division objective, and completed the division mission.

During the next three days the division held a defensive line four miles long along the Ourthe River in the vicinity of Houffalize, using a minimum of troops while the remainder of the division recuperated from the arduous battle it had just been through. The division defensive line was gradually taken over by other units, and on January 20th, the division began moving to an assembly area just south of Liege for a rest before beginning the planning for future operations.

Thus we have the 2nd Armored Division's part in the Ardennes Counteroffensive. In two distinct operations the division had first assisted materially in stopping the German offensive. Then, moving quickly to the east, it had formed the spearhead of the First Army's drive to the south to pinch off the point of the

Bulge. In both it had been eminently successful, and it could look forward to the battles that were surely to come with the confidence born of the ultimate test of battle worthiness, passed with flying colors.

The end of the Bulge also marked the end of German hopes of winning the war. All the enemy could now do was to prolong it as much as he could, but the end in any case was inevitably the same. His carefully hoarded military might had been spent, and there was not enough left to fill the gaps through which the Allied attacks would surely come.

The effect of the Bulge on the Allied armies was no less marked. It had killed all inclinations to over-optimism, and now the entire line settled down to a determined campaign of attack, to physically occupy the whole of Germany, if necessary. Gone were the bright hopes of a sudden German collapse. An enemy which could mount and execute an attack as formidable as the Ardennes Counteroffensive, in the midst of a defensive campaign, would not surrender to a static foe.

The part which the 2nd Armored Division played in the battle was only one of the scores of similar operations which formed the whole of the German defeat; but it serves as a striking example of the heroic struggle in this, the most severe test of American troops in the European war. What Von Rundstedt could not see, on that winter day in the Caserne below Krefeld, was that, less than five months later, the same division which was to destroy his prized 2nd Panzer Division would, in its advance to the Rhine, occupy this same building, and use it as its command post, there to plan further attacks against his dwindling army.

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BOOK DEPARTMENT

The Armored Cavalry Journal

OTHER BRANCHES

Brigadier General Wendell Westover

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(Editor's Note: We had planned to carry an article on the Organized Reserve Corps in this issue, however, ORC is under study, and we hope to have an article for the May-June issue covering the new program. Next issue will feature a statement by the Chief, National Guard Bureau, along with an article on the Guard activities.)

The part that the non-professional soldier has played in the defense of this nation is indeed a tribute to the self-sacrifice, courage and high ideals of a vast segment of the American people.

Our country, by virtue of its traditions and form of Government, has never maintained a large standing Army. It has relied on the individual citizen to enter the military service in time of need, to serve until the emergency is resolved.

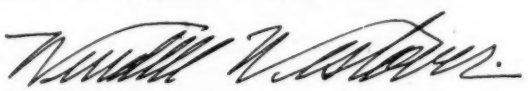
The very nature of the founding of this Government placed the citizen of the U.S.A. in close relation to its National Defense. In the framing of our Constitution, nine of the eighteen powers granted to Congress in Article One relate directly to the National Defense.

Our concept of government and our way of life do not lend themselves to the maintenance of a large peacetime force. Rather, our policy is to maintain a moderate professional force augmented by organized, trained and equipped Reserve forces.

Based upon the experiences of the past and the exigencies of the future, the Organized Reserve Corps is at this moment undergoing a comprehensive appraisal. The result of this analysis may well bring about the implementation of a new program, designed to create a truly effective adjunct to our defense scheme. Attention is being given to such important aspects as organization, facilities, training and equipping for any possible war of the future, together with incentives such as pay, promotion and retirement.

Since, in time of war, the reservists comprise the greater portion of our forces, full support of a strong, well-equipped, highly trained Organized Reserve Corps is requisite to our National Security. Attainment of security forces in actuality promises to be our best insurance for peace.

The service of the Armored Cavalry Journal as a medium for the promotion of understanding among our various arms, branches and components, is most commendable. Only by concerted effort can we meet and acquit our responsibilities as Americans.



Brigadier General, U. S. Army,
Executive for Reserve and R.O.T.C. Affairs.

ORGANIZED RESERVE CORPS

A Reserve Training Program

by Major Nathan M. Quinn

[Editor's Note: The training program in progress for reserve components is closely related to our program of national preparedness. The schedules in operation at various points throughout the country show a trend in the right direction. It is particularly heartening to see the use being made of the speaker's platform to provide qualified lecturers on specialized subjects. There is a lucrative field to be tapped in securing well-known figures in the fields of government, education, business and diplomacy to supplement the purely military diet, thus injecting novelty, interest and remuneration into the course of instruction. The increasing recognition of the importance of a knowledge of foreign affairs as a basic part of military training is gratifying.

In the interest of supplying a medium for the presentation of ideas of value to reserve instructors, the Armored Cavalry Journal publishes the following schedule set up at Boston, Massachusetts, for the units indicated. Major Nathan M. Quinn has prepared this program.

Major Quinn stresses the importance of enlisting the aid of the students in the procurement of speakers. Interest in the course is heightened by this participation in the activities related to planning the instruction.

Major Quinn sends meeting notices to all members of the class, which serve in turn as the pass for entry to the Army Base. This program is comprehensive, and may well be of help to other instructors in setting up or broadening their programs. The period covered is September, 1947, to June, 1948.]

Primary Master Schedule
20 Hours

Guest Speakers & Films, Cav & Arm Subjects
Methods of Instructions
Customs of the Service
Domestic Disturbances & Martial Law
Organization of RA & ORC
Historical Illustrations
Training Aids
Air Portability
Radio Procedure & Nets
CPX, Staff Procedure
Estimate of Situation
Tactics of Tank Company
Reconnaissance, Mounted & Dismounted
Amphibian Intelligence
Infantry, Tank, Artillery, Engineer Team
Breaks in meetings
Free time for C.O.s & Instructors for Ideas plans and announcements.

Supplementary Master Schedule
20 Hours

Command Post, Orgn & Opn
Communications within the Unit
Organization of Armored Units
Tank and Armored Cavalry Gunnery
Adjustment of Fire by FO methods
Bridges
Infantry, Tank, Artillery, Engineer Team
Orders and Reports
Reconnaissance, Mounted & Dismounted
Tactics of Tank Battalion
Orgn & Tactical Employment of Amphibian Tank & Tractor Battalions.
Specialist Training
Commanders time for review & retraining
Map & Aerial Photo Reading
Historical Illustrations
Supply
Routine Breaks

SPECIAL SUBJECTS AND SPEAKERS SCHEDULE

Units	*Date*	*Speaker or Officer in Charge*	*Subject*	*Place*
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn	8 Sep 47	Unit COs	Training Schedules	7th Floor Army Base
321st Cav Rcn Sq	24 Sep 47	Lt. Col. Costas Caraganis, CO	Recruiting of Enlisted Res Cadre	Federal Bldg 7th Floor Room 720
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp (Cav & Arm)	20 Oct 47	Prof. Demes Harvard Univ, Prof of Psychology & Mr. Constantine A. Triantofyllakos, Greek Consul at Boston	Political Situation in Greece Leading up to U.S. Loan & and its Significance to the Future of Greece	General Fox Connor, Auditorium, 4th floor, Army Base, Boston
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp (Cav & Arm)	17 Nov 47	Mr. Peterson, U. S. Dept of Agriculture & Dr. Carl F. Dunker, Ass't Dir of Research Chas. M. Cox Company	Inspection of Produce purchased by the Army in the Open Market. Dehydration of food and canning as it applies to the Army	General Fox Connor, Auditorium, 4th Floor, Army Base, Boston
304th Cavalry Group (all Cavalry & Armored Officers invited either or both days)	13 & 14 Dec 47 (Sat & Sun)	Col. Richard Hosmer CO, 304th Cav Group	CPX W/similar and higher echelons of Command	8th Floor, Sec F West Army Base, Boston, Mass.
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp (Cav & Arm)	Jan 1948 (Date to be Announced)	Prof Frank Schmitt, Prof of Biology at M.I.T. Cambridge Mass	Development of Weapons during WW II	General Fox Connor, Auditorium, 4th Floor, Army Base, Boston
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp, (Cav & Arm)	Feb 1948 (Date to be Announced)	Lt. Col. Costas L. Caraganis, CO 321st Cav Rcn Squadron	Tank, Inf, Engr Team. Battle Experience CCA 4th Arm Div WW II	General Fox Connor, Auditorium, 4th Floor, Army Base, Boston
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp, (Cav & Arm)	March 1948	Capt. Edward Riccio Commo Officer 321st Cav Rcn Sq	Army Radio Nets & Procedure Part 1 CPX	General Fox Connor, Auditorium, 4th Floor, Army Base, Boston
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp, (Cav & Arm)	April 1948 (Date to be Announced)	Capt. Edward Riccio Commo Officer 321st Cav Rcn Sq	Part II, CPX	General Fox Connor, Auditorium, 4th Floor, Army Base, Boston
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp, (Cav & Arm)	May 1948 (Date to be Announced)	Major Stanley Tyler Ex Off 321st Cav & 1st Lt. Hugh Jones Adjt. 321st Cav	Chemical Warfare Service WW II Tactics of Tank Co; Prisoner of War Experience in German Prison Camp	General Fox Connor, Auditorium, 4th Floor, Army Base, Boston
304th Cav, 321st Cav 818th Tank Bn, 817th Tank Bn 94th Div Rcn Trp, 111th OR Comp Gp, (Cav & Arm)	June 1948 (Date to be Announced)	Hon. Henry Cabot Lodge U.S. Senator	Mr. Lodge's Subject to be announced at a later date.	General Fox Connor, Auditorium, 4th Floor, Army Base, Boston

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The Book Department

Armored Cavalry Journal

Military Bridge Development

by Lieutenant Colonel Jerome L. Spurr

MILITARY BRIDGES are portable, temporary structures designed to meet the load requirements of troops with their armament, equipment and supplies, and erected to facilitate their movements in field operations. In this article, we shall be concerned only with that type used in the crossing of water obstacles, that depends for its support (either in whole or in part) on the buoyancy of floats or pontons.

Though the distinction between a tactical and a nontactical bridge is not a sharp one, this discussion will deal only with the tactical type of structure where speed of movement, assembly of parts, and erection with minimum essential equipment under battle conditions are prime requirements.

Early History

Our present-day ponton bridges are a development of the ancient bridge of boats. Well known to every schoolboy are the two bridges of this type built by Xerxes over the Dardanelles, then known as the Hellespont, in 480 B.C. According to Herodotus, these structures were about three-quarters of a mile in length. Buoyancy was provided by galleys placed side by side, lashed to each other and anchored, except where gaps were provided to permit water-borne traffic to pass. Six cables, two constructed of flax and four of papyrus, were laid across the line of boats and anchored on each bank. These cables supported a plank floor which, in turn, was covered with brush and topped with a layer of earth to provide a smooth, cushioned roadway. This bridging operation, though unopposed and nontactical, was a complete success. In the course of a week, the two bridges were reported to have carried without accident a military force of more than three and one-half million men and many thousands of camp followers, horses, mules, elephants, and camels.

The first historical use of ponton trains was made by Alexander of Macedonia in the crossing of the Jhelum River, then called the Hydespes, in India against Porus about 327 B.C. While no floating bridge was constructed in this crossing, it is significant that, with respect to present design, the pontons were transported in sections to the vicinity of the river at a site safely removed from the defended bank, assembled, and used for ferrying in a surprise crossing.

Bridging was further developed by the Romans, particularly by Julius Caesar who placed great emphasis on the engineer training of his army. By the time of Julian's campaigns against the Germans from 357 to 361 A.D., the Roman Army was equipped with light ponton bridging, including boats consisting of a wooden frame covered with a leather skin.

By the seventeenth century, the French and Dutch were using similar type pontons in their bridge trains, but utilized tin and copper, respectively, for the covering. In our Light Ponton Bridge, 7½ ton, Model 1926, an aluminum skin was first used over a duralumin frame. By the middle of the eighteenth century, the Russians developed a ponton of tarpaulin stretched over a wooden frame which could be dismantled for transportation. In 1853, the French adopted a flat bottom, wooden boat as their standard ponton. In 1861, at the start of the Civil War, the engineer floating equipage consisted of about 160 boats of the French model with the necessary stringers and flooring, known to the "trade" as balk and chess, anchors and cordage, and a number of trestles and Russian canvas boats, according to General J. G. Barnard's report on engineer operations in the Peninsular Campaign.

Prior to the introduction of the French and Russian types, it is interesting to note that in 1846, ponton equipage utilizing inflated rubberized canvas floats was adopted and furnished to Generals Scott and Taylor for operations against Mexico. The floats, consisting of three parallel rubber connected cylinders were about 20 feet long and five feet wide. The cylinders were subdivided into three compartments, each being furnished with a nozzle for inflation by a pair of bellows.

Though the equipment arrived too late to be of any real service in the war, it was standard bridging until 1858. By this time, the sulphur used in vulcanizing the rubber had formed sulphuric acid which destroyed the canvas. Damage by wear on gravelly beaches, vulnerability to rifle fire, and oscillation sufficient to make the bridge unsafe for use by horses were some of the additional defects attributed to this type of float.

Modern Development

The first important change in heavy floating equipage from the Civil War type was the 23-ton ponton bridge, Model 1924. A steel trestle was used to accommodate changes in water level, which consisted of a steel latticed girder transom, columns of steel tubing, steel

shoes and chain hoists for adjusting the transom on the columns. The river end of the hinge span was supported by a hinge sill suspended transversely between the first and second boats instead of directly on the first boat as in the old model. This model provided a stronger trestle and distributed the load on the hinge span raft. The size of balk, chess, sills, and pontons was increased to take the heavier loads. Through the use of rigid metal balk fasteners which replaced the rope lashings on the former model, a considerable amount of continuous beam action was introduced so that as many as five pontons assisted in providing buoyancy.

In 1938, the 25-ton ponton was adopted. In this model, the wooden ponton weighing approximately 4,000 pounds was replaced by the aluminum type, followed later by a steel one, owing to the use of the lighter metal in the airplane industry. The aluminum ponton weighs 2,600 pounds and the steel type 4,200 pounds. The ability of a light metal to reduce weight was clearly demonstrated in this model. The steel type was too heavy to be lifted and carried about readily by hand though this means could be used. A three-boat hinge sill raft was used to receive the load coming onto the floating section of the bridge from the trestle. This bridge continued as the standard ponton type until replacement by the M-4 bridge after World War II.

A distinct change in type of equipment occurred in 1942 with the introduction of the steel treadway bridge designed to furnish a rapid means of stream crossing for vehicles of the armored force. It consists of pneumatic floats supporting a pair of steel treadways rigidly joined end to end to form a continuous set of tracks. When shallow banks or shoals prevent the use of floats, the steel treadways can be supported on 25-ton trestles. The M-1 model was superseded in 1943 by the M-2 model with a wider track, greater clear width between outer curbs and rubber floats with increased buoyancy.

In addition to transporting the bridge equipment, bridge construction trucks were equipped with a hydraulic crane which can lift two treadways from the truck and place them in position on a float in a single operation. Three lengths of single track or two lengths of double track may be raised into position after first unloading and then connecting the treadway sections.

The development of floating bridges since the advent of motorized vehicles has become like reconnaissance a continuous requirement. Prior to the advent of the heavier loads of modern wheel and track vehicles, floating bridge equipment changed slowly. It was not until after the experiences of the First World War that the heavy bridge train, Model 1869, developed during and after the Civil War, was superseded by the Ponton Bridge, 23-ton, Model 1924. The model 1869 bridge had a normal capacity of two and one-half tons of gross load which was sufficient to accommodate the loaded escort wagon.

It is essential that the construction of a bridge follow the seizure of the second objective in the bridgehead operation. This will eliminate ground observed artillery fire from the selected site, and effective small-arms fire (which is presumed to be removed upon capture of the initial objective). The early urgent requirements for the forward displacement of armor and supporting artillery in a coordinated attack beyond the far shore, on the other hand, frequently lead in practice to the initiation of construction well in advance of the capture of the first two bridgehead objectives. Since time is of such tremendous advantage in consolidating the bridgehead before enemy reserves can be assembled for a counterattack, the tactical conditions under which the bridge may be required to be constructed merit particular attention in the design of floating structures.

Bridge Requirements

In order to evaluate progressive steps in the development of floating equipage and to use the experience of the past to assist in the solution of present problems, it is desirable to review the characteristics of a serviceable bridge. Commencing with general features and a study of how requirements have been met, it is proposed to develop the definite requisites of the present and the indications of future demands. Since a healthy discontent with present limitations is one of the best ways to escape the pitfall of complacency, our present progress, like that of the past, should be considered a stepping stone to future improvements. For this reason, the emphasis should be on continuous effort to overcome our present shortcomings and anticipate future trends.

A bridge must have the required capacity and buoyancy which will expediently accommodate loadings of the weight, size and type employed in the unit for which the structure is designed in average stream velocities.

It should be light in weight as a whole to keep transportation loads at a minimum, and in its component parts to permit erection by manpower as an alternate method. High strength and lightweight alloys should be utilized to the fullest extent. The size of individual members should permit them to be readily transported in standard vehicles and trailers as mobile units. Rapid and simple erection is required if the equipage is to serve its purpose of permitting tanks and mobile heavy weapons to closely support the assault waves. It should be flexible, insuring an economy of material and effort through use of component parts for rafts and lighter load structures capable of conversion to the heaviest type bridge. Damaged parts should be easily replaceable with minimum interruption to traffic. The design should permit removal of floating bays for passage of river traffic and debris, and shore connections must provide adequately for water level fluctuations and unstable foundations.

Maintenance should be facilitated by a durable structure able to withstand rough usage and capable of repairs in the field.

The bridge must be resistant to enemy action and

stream irregularities including high velocities and debris. Briefly summarizing, the desirable bridge should have the following characteristics:

1. Strong
2. Light
3. Mobile
4. Simple
5. Flexible
6. Durable
7. Invulnerable
8. Stable

Present Developments

In 1945, the M-4 bridge was adopted which replaced the 25-ton ponton model, but does not embody all of the desirable characteristics of the treadway. The deck is formed of hollow aluminum alloy deck balk which serve as both stringers and flooring. The balk being buoyant preserves the flotation characteristic of the wooden type in addition to providing increased strength. The balk can be used as floats and decking for a footbridge, or for bridging short ditch spans. A light load can be put across the M-4 bridge with a ponton knocked out.

The floating spans are supported on streamlined nestable half-pontons of aluminum alloy fastened stern to stern to form a whole ponton and spaced 15 feet center to center. For 25-ton loads only the half-boat need be used, an additional half-boat being added later when the need for increased capacity develops. In a like manner, damaged pontons may be readily replaced by half-boats. As a result of model studies of streamlining requirements, the ponton "nests" in a high velocity current so well that while the water may be higher than the gunwale, none enters the boat. Improved streamlining has also minimized the problem of debris in high velocities. With currents of 10 feet per second, or greater, a 100 per cent reinforced bridge will pass debris beneath the pontons.

Continuous deck connections are used when possible between shore pontons and abutments, but where high banks or variations in river stage require them, trestle bays are available.

The M-4 bridge can be utilized as a floating or fixed bridge, a combination of both, or as a raft. In a five-foot per second current with a 20-balk deck measuring 15 feet in width, it will carry a class 60-ton load. The capacity can be increased by the addition of an extra triparti ponton to 100 tons with the same stream velocity, and to an estimated 75 tons in a current of nine feet per second.

Under favorable conditions, the floating bridge M-4 has been erected from transportation at the rate of about 125 feet per hour when no trestles were used. Under similar conditions, the treadway bridge can be constructed at the rate of about 170 feet per hour.

Pneumatic floats with saddle adapters designed for use with aluminum deck balk are utilized in the M-4 bridge for sites on soft or swampy ground where adequate support for trestles does not exist, and on long shelving beaches where pontons may be grounded.

Conclusions

In the floating bridge M-4, many changes in design have improved the operating characteristics found deficient in the equipage of World War II. The progress made to date is indicative of further successful developments at a rate which should keep well ahead of future needs.

Reviewing our bridge requirements, we must have a structure that will carry the present loads and any foreseeable future ones. While the M-4 bridge has adequate capacity for present needs, the way for increased loading is open through the use of the three section ponton with a square-end center section to which the outer half-boats may be fastened.

The accelerated advances in metallurgy during the war and the enormously increased productive capacity of aluminum and its alloys have served and should continue to provide increased strength of bridging material without excessive increase in weight. While the M-2 treadway has a weight in pounds per linear foot of about 660 as compared to the M-4 floating bridge with a value of about 550, the weight per linear foot per ton capacity is about 14 for the former and 9.2 for the latter.

As previously pointed out, the treadway type constructed with the use of the bridge truck continues to be the more mobile of the present bridges due to space requirements for transportation and mechanical handling. Single unit truck transportation such as is used for the treadway type is desirable over the trailer form of transportation used for the M-4 pontons. Less parts help to make the treadway bridge easier to construct than the M-4. The elimination of chess as used in the 25-ton ponton bridge is a progressive step in simplification, and further progress may be expected.

Flexibility has been improved considerably in the M-4 type which permits increased load capacity by additions to the bridge in the water of boat sections. Through the addition of deck balk as needed, the required deck space to accommodate vehicles of varying width may be readily obtained.

It is believed that the M-4 type has resulted in improved durability. The metal deck has removed the need of floor treads required with the 25-ton type.

Because of the ease of removal of boat sections and the buoyancy of pontons and balk, the M-4 type is less vulnerable to enemy action. The use of metal in place of wood or rubber has decreased its weakness to incendiary attack.

Streamlining has produced a bridge in the M-4 type which is more stable, particularly in rapid currents, than any type which we have previously employed.

Much development and testing are still needed, including use under cold and tropical conditions, and ground and air transportability studies. The goal is an all-purpose type of structure embodying the inherent advantages of the best type of single purpose bridge under all foreseeable conditions.

Overhaul Military Justice

*by Colonel Charles M. Dickson**

MILITARY Justice is long overdue for a complete overhauling. The time has come to revise and rewrite the antiquated "Articles of War" and the "Articles for the Government of the Navy."

With the unification of the Armed Forces now is the opportune time for Congress to enact a law revising and improving our "Military Penal Code" as applied to all members of the Armed Forces. There is no need for separate laws and rules of procedure in each Service.

Another important step necessary to improve and establish a system for the fair administration of justice in the Armed Forces is an adequate appellate court of review.

I have in mind an Armed Forces Supreme Court with final appellate jurisdiction of all cases tried by general courts-martial—Army, Navy, and Air Force—and I suggest that there should be a "Judge Advocate General of the Armed Forces" having powers and duties in cases involving military law, similar to those of The Attorney General in cases involving civil law.

There is a "hidden fluke" in Article of War 50½ which was enacted by Congress in the year 1920 as a result of the popular reaction that existed then against unjust sentences imposed by General Courts-Martial during World War I. This Article was an attempt by Congress "to provide for more effective review" of sentences by General Courts-Martial. It *was an improvement* and *has* in a measure raised the standard and quality of military justice in the limited class of cases which *must* be passed on by a Board of Review. The "hidden fluke" is Article of War 50½. It is so worded that a very large per cent of the records of trial by General Courts-Martial are not reviewed by a Board of Review at all. For example, in the following types of cases, the sentence of a general court-martial can now legally be carried into execution by the General Officer appointing the Court, without the record of trial having been examined by a Board of Review, without the approval of The Judge Advocate General, without the approval of the Secretary of War, and without the approval of the President himself.

Type I.

Sentences against privates and noncommissioned officers if the General appointing the Court *suspends* the execution of the sentence at the same time he takes his final action. This is true even though such sentences involve the penalties of confinement in military barracks for a term of years or life, dishonorable discharge and forfeiture of all pay and allowances. Furthermore, the General taking such action can legally, on the following day or any day thereafter, issue an order revoking the suspension of the sentence and ordering it carried into execution, thus defeating all appellate review which was often done between the time of Pearl Harbor and V-J Day, because the great number of cases resulted in long delay before a record of trial could be examined by a Board of Review, more delay before the opinion of the Board of Review could be examined by The Judge Advocate General, more delay in transmitting "the record and the board's opinion, with his recommendation, directly to the Secretary of War for the action of the President," as required by Article of War 50½.

Type II.

Sentences against commissioned officers—All that is said in the preceding paragraph applies equally to cases involving commissioned officers of the grades of 1st and 2nd lieutenants, captain, Major, lieutenant colonel, and colonel, but does not apply to brigadier general or higher grades.

Type III.

Sentences against privates, noncommissioned officers, warrant officers, or commissioned officers below the grade of brigadier general, not involving death, dismissal, dishonorable discharge or confinement in a *penitentiary*. In other words, if sentences in these cases merely punish the soldier or officer by reprimand, fine, forfeiture of pay, restriction to camp or quarters, or limited confinement in a guardhouse, at hard labor, then the sentence can be carried into execution by the order of the General appointing the Court, without any appellate review whatsoever.

Under the provisions of HR 2575 as passed by the House, Article of War 50½ is repealed but the Act exempts from appellate review substantially all sentences of the types mentioned in I, II, and III above, but the Act seems to deprive the appointing General of the "trick power" to avoid appellate review by incorporating in his final action an order that the execution of the sentence be suspended, and then—the next day or later—ordering the suspension revoked and the sentence to be carried into execution.

The Act retains Boards of Review as now constituted and creates new super Boards of Review to be composed of three General Officers of The Judge Advocate General's Department. These are called "Judicial Councils." There is no more finality to the opinion of a Judicial Council then there is to that of a

*Judge Advocate of the Third Service Command during World War II and an attorney of 35 years experience in civil life.

Board of Review. I am convinced that these Judicial Councils will contribute little, if anything, to the effort "to provide for more effective appellate review." It is probable that they will only serve to further complicate, confuse, and delay the existing system of *Appellate Review*. Furthermore, the members of these Judicial Councils cannot, in any true sense, function as judges. These Judicial Councils are to be constituted by The Judge Advocate as adjuncts of his office and can be abolished at his will. The members (although Generals) are appointed and removed at his pleasure. No action of a Judicial Council can become effective without approval of the Judge Advocate General, and a Judicial Council's findings of fact and conclusions of law are not legally valid unless concurred in by The Judge Advocate General.

Boards of Revew are mere adjuncts of the Office of The Judge Advocate General. As I recall, they were provided for by Congress shortly after World War I to meet the hue and cry that arose against the court-martial system at that time. The failure of Boards of Review to provide a "more effective appellate review" of convictions by general courts-martial is due to several fundamental causes, namely, (1) the members of such Boards are army officers "under the command" of The Judge Advocate General. Their appointment and removal are at the will of the individual who happens to be The Judge Advocate General. Their military ratings and their promotions are in the hands of The Judge Advocate General and, in most cases, their findings of fact as well as their findings of law, are merely advisory to The Judge Advocate General and the President. There is no finality to the action and decision of a Board of Review, and to make the action of a Board of Review final and authoritative requires further executive action by The Judge Advocate General, The Secretary of War (now, I believe, The Secretary of the Army), and, finally, in some cases, by the President himself. While hostilities were still on during World War II, the President's time was so occupied with other matters of national concern that it was physically impossible for him to properly consider and take final action upon the sentences by general courts-martial in thousands of cases of enlisted men, army officers, and even civilians who were subject to military law. Several times the President was in foreign lands conferring with the chief executives of our principal allies and, as a result, records of trial by general courts-martial piled up to the ceiling awaiting the return of our Chief Executive to the White House, and during all of this time American soldiers by the hundreds, and probably thousands, and American army officers were in confinement or under severe restrictions at a dead expense to the Federal government, having nothing to do except to brood over their disgrace of having been convicted by a general court-martial. In a very large per cent of these cases, the sentences by general courts-martial to dishonorable discharge, long terms of imprisonment, or death, were just and were finally approved or confirmed by the President, but in too many cases (even though they be few in number) the sentences were outrageous and regrettable miscarriages of justice. I know from actual experience that in most of these cases justice finally prevailed through our existing defective appellate review system.

The "Judicial Council" set up in HR 2575 is new but has most of the objections that exist in Boards of Review. In fact, I am inclined to believe that the creation of these "Judicial Councils" will further impair the effectiveness of appellate review.

In my thinking there is only one remedy for this evil, and it is relatively simple: The remedy is to amend HR 2575 by eliminating therefrom all provisions relating to "Judicial Councils" and all provisions requiring the President to approve or confirm sentences by general courts-martial (the President should have power to grant executive clemency as in civil cases), and abolish all Boards of Review, and then create an entirely new and separate tribunal in the nature of an "Armed Forces Supreme Court" and confer upon this Court full and final appellate jurisdiction in cases involving sentences by general courts-martial; and further empower this Supreme Court, for military cases, to adopt and promulgate rules of procedure governing the trials of cases by general courts-martial and make the decisions of this military Supreme Court absolutely final in such cases, regardless of whether such decision is to approve, modify, or reverse the action of the trial court. And, finally, make the duties and powers of The Judge Advocate General in military cases correspond with the duties and powers of The Attorney General in civil cases.

The members of the "Armed Forces Supreme Court" should be nominated by the President and confirmed by the Senate in the same manner as is now done in the cases of members of the Supreme Court of the United States.

Army officers in command of troops must have ample authority and power to enforce discipline and I see no objection to increasing such powers of a Commanding Officer but the authority and power to command troops for combat purposes is a wholly separate and distinct thing from a judicial procedure to determine the guilt or innocence of one of our own citizens who is charged with violation of a military or civil law, subjecting such citizen to the loss of his reputation, or his liberty or his life. All soldiers, whether privates, army officers or generals must be subject to command for purposes of combating the enemy. An army without the power in the officers to command and the corresponding duty of the soldier to obey ceases to be an army, and becomes a mob. On the other hand, a judicial body empowered to administer justice to the individual citizen charged with crime should not be under the domination or command of anyone, not even the President of the United States. A judge who is subject to command from any source is not a judge.

Military Intelligence Training In The First Cavalry Division

by Major L. F. Clark, Jr.

Introduction

DURING the month of May 1947, the Commanding General of the 1st Cavalry Division and his staff found themselves confronted with a training problem of increasing complications. Since the 1st Cavalry Division first entered TOKYO on 8 September 1945, there has been a consistent and continuous loss of combat experienced personnel, including those who learned about Oriental Occupation duties the hard way during the first twenty-one months of the Division's duties on HONSHU. The Division commander, Major General William C. Chase, being an experienced G-2 himself, was well aware of the pressing need for properly trained men in this work and directed G-2 to form a Military Intelligence Training School for selected enlisted men at the Division headquarters.

Scope

The G-2 Section, upon considering the scope of instruction to be accomplished, drew up a plan for submission to the Chief of Staff; the object of the course being to train enough selected enlisted men to furnish each S-2 Section, down to and including squadrons, battalions, and separate troops, with at least one trained enlisted intelligence specialist in as short a time as possible. It was determined that a two and one-half week-course, staffed and conducted by members of the Division G-2 Section, would accomplish the mission. A plan was based on an eight-hour training day, five days a week, with a total of ninety-seven hours of instruction.

References

For a general outline, the planners turned to the Intelligence Officers' Handbook published by the Command and General Staff School during the war. In answer to letters of inquiry dispatched to the Intelligence Division of the Ground General School, Fort Riley, Kansas and to Headquarters IX and I Corps of the Eighth Army in Japan, the section received an abundance of helpful publications to be used in formulating its program.

Students

To insure that the majority of the men selected were of a type to assimilate the instruction properly, the following criteria were laid down:

1. AGCT score of 100 or more.
2. At least one year to serve in the theater.
3. Contemplated or current employment in Intelligence work.
4. A desire to attend the course.

This selective process produced a high grade of students who approached their work with interest and enthusiasm, thus greatly simplifying the work of the instructors. All units of the Division having an organic or appointed S-2 Section were given an opportunity to send at least one man during the three sessions of the school. The Division prescribed that units not having an S-2 on Tables of Organization would appoint an acting intelligence officer so that separate troops and squadrons were included in this instruction.

Course of Study

An effort was made to strike an equitable and profitable balance between tactical intelligence training and the highly specialized and often unrelated duties of the Occupation. It was felt that the tactical aspect of the training could well be based upon the references cited above, but that the specialized duties of the Occupation could only be covered from the experiences of the veteran personnel remaining with the units with the help of representatives of Military Government Teams and the Counter Intelligence Corps.

In the vast majority of subjects, a large volume of information was presented during a comparatively short instruction period, therefore heavy reliance was placed on the conference method of teaching supplemented by a liberal use of charts, training films, and other visual aids. The heaviest emphasis in time and detail of subject matter was placed upon Organization, Enemy Capabilities, and G-2 Records, which acquainted the men with the missions, organizations and duties of the intelligence sections and upon Elementary Map Reading, Observation and Patrolling, and Aerial Photo Reading. Since many of the students were from regimental I & R Platoons and the Division Reconnaissance Troop as well as Unit S-2 sections, it was found advis-

able to give very comprehensive and detailed instruction in map reading, and its allied subjects. The entire subject matter of FM's 21-25 and 21-26 was covered during this instruction. Experience proved that the intensive nature of the classroom work required a balance of physical outdoor application in order to prevent cramming and the resultant mental staleness. Practical field problems giving actual experience in subject matter taught were held at frequent intervals during which each individual was required to use his newly found knowledge on the ground without the aid of an instructor or a more experienced colleague. During the classroom instruction in these subjects, every effort was made to require each man to make immediate and physical use of the material just presented to him by the instructor. It was found that the frequent use of problems, a large majority of them being mathematical in nature, increasing in difficulty and scope as the class advanced, was an excellent means of promoting interest and holding attention. The interrelationship between the ground, the line map, and the aerial photo and photo map was stressed and illustrated from a practical point of view by the use of a single ground area for all three divisions of the subject. In order to apply this work as closely as possible to the Occupational duties, a thorough study of American and Japanese conventional signs and symbols using FM's 21-30 and 30-22 was given together with a selected list of Japanese words describing terrain features. The principles of observation and patrolling and the use of the compass were presented in conjunction with the advanced map reading course and given practical application during the map and field problems.

A short course in Order of Battle was presented in order to familarize the men with the terms, procedure and records used in this important part of G-2 work. Only a limited amount of time was spent on this course due to a pressing need for the allocation of more time for subjects more closely applicable to the units' Occupation duties. The principles of figuring time and space movement calculations were offered in a one-hour class lecture; however, a two-hour laboratory exercise devoted to working practical problems from maps of the local area was given during one of the map reading periods.

In order to emphasize the intelligence policies of the Division Commander, a one-hour conference, during which discussion was encouraged, was held during the first few days of instruction. The intelligence memoranda and annexes published by the Division were reviewed and discussed in detail in order to insure that the men had a thorough understanding not only of the Occupational mission of the Divisions, but also of the policies and methods prescribed for its execution. Every student was furnished with a copy of each Division intelligence publication and urged to form a personal file and to keep it up to date upon return to his unit.

Terrain studies and meteorological data with special reference to the local situation were covered in a two-hour period of which one hour was devoted to terrain sketching and the proper use of descriptive terms. Weather conditions characteristic of the island of HONSHU and their probable effects upon the Occupational mission were discussed in detail, and the students were furnished with the names, locations, and means of communication of the appropriate local weather stations.

A mimeographed extract of the more pertinent parts of Army Regulations 380-5, Safeguarding Military Information, was issued to each man and explained in detail during one class. Special emphasis was laid upon the proper handling of classified documents and the physical security of an S-2 office, every effort being made to make the discussion as practical as possible and directly applicable to the conditions existing in the Division units.

The group was given instruction and actual practice in writing clear and legible messages and the employment of all means of communication available in the Division Zone of Responsibility. This subject was also reviewed during the scouting and patrolling course. Bearing in mind that the conduct of a successful Occupation hinges directly upon the efficiency of control of the occupied people, two hours were devoted to a discussion of the psychology and customs of the Japanese people. This included a brief resume of the nation's history, its government, and social institutions, liberally illustrated with examples from the surrounding people and territory. The various religions, superstitions, and festival day observances with which the American soldier is apt to come into contact were described and their relative degree of importance to the Japanese people outlined. The prescribed methods of interrogation of prisoners of war and the provisions of the Geneva

An Oriental watches an orientation by two First Cavalry Intelligence School students.

Convention as it applies to them were covered with special emphasis upon the experiences of the war in the Pacific. The natural development of the Occupation Language Detachment from the combat prisoner of war interrogation team was explained and illustrated from the instructor's experiences.

Experience had shown that a close degree of cooperation between the tactical troops and the various other US Army agencies in the Division Zone of Responsibility and with the Japanese civil law enforcement agencies is a must for occupational success. In order to familiarize the students with the duties and organization of these units, the local Counter Intelligence Corps and Military Government commanders each sent a representative who gave a lecture on his branch's specialized duties. These officers emphasized the methods by which they and the Division units could achieve maximum cooperation with each other. Many common misconceptions were adjusted in this manner and the men were given the address of their particular local CIC unit and the best means of communication with them for use upon their return to their organizations. In addition to the discussion of his own section, the CIC representative mentioned the employment of the Japanese police as a source of information and outlined the best methods of using them. The Military Government officer stressed the objective of the Occupation and pointed out where the duties of the Division coincided with and where they were separate from those of the Military Government.

Since the unit Intelligence Officer in Regiments and Battalions is usually the unit Provost Marshal in addition to his other duties, the law enforcement aspect of the Occupation was stressed more than would be expected in the usual course in Military Intelligence. In addition to the lecture on the CID, a film from the Federal Bureau of Investigation, entitled "The Arrest and Search of Persons," was shown to outline approved methods of conducting raids and searches. The Division CID officer conducted an hour's instruction in the duties of the Criminal Investigation Division and stressed the main points in which they differ from those of the CIC.

The Division PIO gave a short talk on the local aspects of publicity and propaganda since the publicity work in line units is often handled by the S-2.

It was found that many of the graduates of the course were utilized by their units as instructors in the various subjects that they had studied. In order to prepare them properly for this sort of mission, a one-hour lecture was given covering the salient points in the preparation of an instruction period. This was followed by a three-hour practical exercise during which each student was required to present a five-minute period of instruction on any subject of his own choice. His talk was then criticized constructively by his classmates and the instructor. Experience has proved that this procedure contributed in some measure to the conquest of stage-fright by the junior noncommissioned officers.

Examinations

All subjects were covered by examinations at some time during the course. These ranged in type from short oral quizzes to two-hour writs. Each subject had at least one written examination, the simplest of these being a ten-minute true and false type test. All examinations were graded and the grades averaged weekly at which time any man who had failed to make a satisfactory average was returned to his organization. Although every Saturday morning was set aside for examinations, spot quizzes were given in several subjects without warning at any time during the instruction. The student was rated solely on the results of these tests, no allowance being given for such intangibles as "attitude" or "adaptability."

Instructors

The greater part of the instructors were drawn from the Division G-2 Section. The author, assistant G-2, was designated director of the school and charged with the responsibility of organizing and conducting the instruction and with the discipline and administration of the students. Each officer and several of the enlisted specialists of the section conducted one or more classes. The AC of S, G-2 opened each school session with an hour's introduction during which he explained the purpose of the instruction, welcomed the men, and outlined the scope of the school. General Chase maintained a lively personal interest in the intelligence students and their progress. He found time to address each group during its tour of duty at the school when he stressed the importance of their specialized mission not only to the Division but to the theater command. In addition to the officer instructors, the chief clerk of the section covered messages, communication, and the general routine of an S-2 Section. The section was fortunate in having two recent graduates of the Ground General School at Fort Riley; one from the photo interpreters course, and one from the order of battle course. These men were found to be well trained in their respective specialties and were utilized to the fullest extent. After a little practice in methods of instruction they were both found to be competent to conduct instruction in an excellent manner, although the majority of their students were older and higher ranking men. One junior NCO of the G-2 Section with a year of experience in the Occupation was detailed as assistant to the director. He was a licensed projector operator and well qualified in the use of maps and the compass. His duties were to see that all training aids were ready at the right time and place and in operating condition. In addition, he assisted in laying out the field problems, making up schedules and the other clerical work of the school. The 168th Language Detachment, serving with the Division, furnished an expert in things Japanese to hold the classes in POW Interrogation and the Customs of the Japanese People. As has been mentioned before, the Counter Intelligence Corps, Military Government, Criminal Investigation Division, and Public

Information Office each furnished a competent teacher for their respective specialities. The willing cooperation of these guest instructors contributed immeasurably to the success of the school.

Texts

Although the instructors were furnished a list of suggested references by the school, it was realized that the students would have access only to those issued them by the Section. The following list of field manuals was issued to each man together with a compass and straight edge for his use while at the school:

FM 21-5 Military Training
FM 21-25 Elementary Map Reading
FM 21-26 Advanced Map Reading
FM 21-30 Conventional Signs, Military Symbols, and Abbreviations
FM 30-5 Combat Intelligence
FM 30-15 Prisoner of War Interrogation
FM 30-25 Counter Intelligence Corps
FM 30-28 Censorship
FM 30-22 Foreign Signs and Symbols

One stereoscope was made available to every two men although these proved to be critical items to obtain. Necessary maps and aerial photographs were issued on the basis of one to each man and re-used for two succeeding classes with a small loss through fair wear and tear. Since they were encouraged to mark their maps in the field some loss was inevitable.

In several instances, either the appropriate Field Manuals were not available in the theater for issue in sufficient quantities to supply each student, or no suitable text had been compiled. In these cases, a sentence outline of the lecture or appropriate extracts taken directly from the Field Manual were mimeographed and issued to each man at the beginning of the instruction period for his reference. Copies of these improvised texts were made available to units desiring to conduct instruction in that particular subject.

At the close of each week's work, all students were issued a questionnaire for the purpose of making constructive criticism of the course. These papers were not signed so that adverse as well as favorable comments might be given freely. It was found that these student comments were of material benefit in making improvements both in the subject matter presented and in the improvement of the technique of the instructors concerned.

Administration

Realizing that ordinary barracks living conditions are not conducive to outside study, the Director, in coordination with the Director of the Division Central School, obtained well-lighted quarters for the students in one of the Central School billets. The men were organized into a squad under the supervision of the senior noncommissioned officer in the class, who was responsible to the School Director for the discipline and class attendance. Students were carried on temporary duty with the Division Headquarters Troop.

Conclusion

A brief graduation ceremony was held on the final day of each course during which each man who graduated as an honor student received his certificate of completion from General Chase personally and the remainder were given theirs by the AC of S, G-2, in the presence of as many of the instructors as were available at the time. This official evidence of the importance attached to the intelligence training in the Division was found to stimulate friendly competition throughout the entire course and provide an excellent incentive to extra study.

Results

A check showed that the vast majority of the successful graduates were assigned to intelligence duties upon their return to their respective organizations. A large percentage of these men were used not only as trained specialists, but as instructors, and more than three-fourths of the units sending men to the first two sessions of the school requested the allocation of future quotas. The request for additional quotas was found to be particularly significant because, at the time, heavy levies of manpower were being made upon all units of the Division. It is contemplated to offer this instruction again, probably in two consecutive sessions given every six months, in order to furnish trained replacements for the normal attrition caused by the return of men to the United States.

The results of this experience indicate that an NCO school in Military Intelligence is a practical and professionally profitable undertaking for a combat division on Occupation duty, and that the allocation of hours according to the following table is a workable method of accomplishing it.

Allocation of Hours for 1st Cavalry Division Military Intelligence School

Subject	*Hours*
1. Explanation and introduction to course	1
2. Organization, duties, and operation of the Intelligence units of the Division	1
3. Enemy Capabilities, EEI, and Intentions	3
4. G-2 records, files, collation, evaluation, interpretation, dissemination of military information	6
5. Elementary map reading	12
6. Observation and patrolling, advanced map reading	28
7. Aerial photo reading	10
8. Order of Battle	2
9. Time and space calculations	1
10. Division Intelligence publications	1
11. Terrain studies and meteorological data	2
12. AR 380-5 and security of an S-2 office	1
13. Means of communication and message writing	1
14. POW interrogation and Occupation Language Detachment	1
15. Psychology and customs of the Japanese	2
16. The CID, its organization and mission	1
17. Publicity and Propaganda	1
18. The CIC, its organization and mission	2
19. The Military Government, its organization and mission	1
20. Methods of instruction	4
21. Examination and review	12
22. Graduation	4
Total	97

Esperanto For The Tanker

*by Lieutenant Colonel Karl L. Scherer**

AMERICANS being nonconformists and individualists, it is hardly surprising that the past war produced as many methods of engaging a target as there were units in a Branch, Branches in the Army, and Services in the Armed Forces. The local methods not only varied with one another, but also varied in fundamental points from the accepted training doctrine. In many instances the inspirations of the unit commanders were entirely adapted to their own locale and served well as a standard procedure within a unit. Actually, much gunnery training time was devoted to instructing the trainee in the unit's own terminology and procedure.

The fallacy of this course of action was clearly demonstrated when replacements were incorporated into the fighting team. Replacements had generally been trained "according to the book"; training centers and schools had little occasion or time to develop idiosyncrasies. The unlearning process, once the replacement arrived in his unit, was frequently considerable; and in that process the replacement lost confidence either in his previous training or in his new outfit.

The system of local ground rules completely broke down when employed in inter-unit, inter-Branch, or inter-Service firing problems. Everyone remembers the familiar cry, "Well, that ain't the way we done it in our old outfit." In combat as in training, tankers found that they were not using the same firing language as other tankers. They could talk to the infantry about targets, but it took a lot of time to get things squared away. Most tankers figured that the artillery was using some sort of double-talk, throwing in a liberal sprinkling of black magic to get on a target. From the tank hatch, it always looked as if the light bombers were usually just flying off into the far blue yonder when maybe they could have been lambasting an enemy battery, instead. As for naval fire in an assault landing, the tanker just took it for granted that their operations were top secret.

For the tank crew, this language barrier was mainly a source of irritation and a theme for griping: "How come those birds don't get the lead out and help us guys doin' all the fightin'? Why, they can't even talk straight, much less shoot straight." Tank company and battalion commanders were in a better position to evaluate the effects of the lack of inter-unit understanding. To them it meant lives, tanks, and missions when they didn't know where the next unit was shooting or how to request a supporting unit to shoot at something else. They are virtues in their place, but nonconformance and individualism have no place in gunnery when they serve to reduce the effectiveness of the fighting team.

With the increasing interdependence between the Armed Forces and between Branches of the Army; there must at least be a uniform vocabulary—an esperanto—for gunnery; and further, those principles and procedures common to all units, Branches, and Services must be standardized.

Standardization in gunnery vocabulary and its normal usage has been directed by two War Department circulars: Training Circular 6, "Common Procedure for Adjustment of Ground and Naval Gunfire," dated 13 June 1946, and Training Circular 11, "Standardized Fire Commands for Infantry Crew-Served Weapons," dated 18 November 1946. It is essential to train all soldiers who have occasion to fire weapons in this common and basic gunnery vocabulary.

Some of the terms are used only infrequently by tankers. The tanker should recognize these terms and understand what the user means by them. On the other hand, the tanker must have complete familiarity with the standard terms which he habitually uses. Direct fire is his field in gunnery, and he has to know it "cold."

It may seem odd that there should be two training circulars giving gunnery terminology. The difference between them is very simple—practically self-evident. It doesn't require any great experience in gunnery to realize that there are two basic firing situations which confront any individual attempting to place effective fire upon a target. Either the individual is in command of the firing unit and is thereby in a position to give fire commands, or else he has no command function over the firing unit and merely knows of a profitable target which he believes some firing unit ought to be able to destroy with his assistance. In the second situation, the individual makes a request for fire. This is the situation confronting the artillery forward observer; but, more important to the tanker, this is what confronts any tanker when the artillery forward observer becomes a casualty or is unavailable for any other reason.

Each of the two circulars applies to one of the two general firing situations. The vocabulary and usage for fire commands, for both direct and indirect fire, are given in Training Circular 11. It is this circular which guides and standardizes the basic training with crew-served weapons. Inasmuch as all soldiers receive basic training with at least one infantry crew-served weapon, all will be trained in one uniform direct fire terminology and one set of direct fire principles and procedures. In itself, this is quite a step toward standardization.

The vocabulary and usage for requests for fire are

*Weapons Department, The Armored School.

given in Training Circular 6. Training in the actual requests for fire, as given in Training Circular 6 (as distinguished from simply learning the vocabulary, which all tankers can and should perform), might well be limited in armored units to tank company commanders and above. In any case, the vocabulary laid down in the two circulars is uniform.

The sequence in which this uniform vocabulary is used is not at present the same for the two firing situations: fire commands and requests for fire. Conceivably, even the sequence might be standardized; but disregarding this possibility, very considerable benefits will have accrued from the simple step of issuing the two circulars. One tanker talks the same language as the next tanker; tanker replacements use this same language in the same way as do all other tank units; and every tanker can understand what the infantry, artillery, air, or navy is doing in a firing situation.

While Training Circular 11 standardizes fire commands specifically for infantry crew-served weapons, it actually applies equally to tank weapons. The circular was prepared in collaboration with armored officers and follows the pattern of tank gunnery exactly. The vocabulary, the usage, and the sequence of direct fire commands are those which have been accepted for some time as standard for tank gunnery. All tankers can and should use this circular as their gunnery bible, whether commanding the fire of their own individual tanks or of their own tank battalions.

It cannot be assumed that standardization of language and usage is the cure-all for all gunnery problems. The two War Department circulars do not attempt to give the actual steps by which the individual gunner, or weapons crew, manipulates the weapon. Manipulative steps vary with each weapon. They are laid down generally in the appropriate field manuals. As a matter of fact, it is not feasible or necessary to train every soldier to fire every weapon, although there doubtless are advocates of this utopian standardization project. Standardization, at present, does not pretend to make a 155mm section chief out of a 76mm tank commander; however, it will permit one to understand the other. But further than just mutual understanding, any good uniform gunnery procedure should enable one individual to at least use the fire of any other weapon, even if he cannot actually fire that weapon.

The basic training which all soldiers will receive in the principles and procedures of direct fire infantry crew-served weapons will enable them to give uniform and correct fire commands. On the other hand, when the 76mm tank commander needs the fire of the 155-mm gun, he must know more than the vocabulary and procedures for his own weapon and the vocabulary for the adjustment of gunfire, as given in Training Circular 6. He must understand the procedure for shifting fires, and he does not receive this in his basic training. Furthermore, he cannot find it in Training Circular 6.

For many tankers and for many soldiers, Training Circular 6 in its present form is inadequate. If the procedure for adjusting gunfire is to be standardized, at least one procedure should be laid down; one simple and adequate series of steps given. Such a uniform procedure governing the adjustment of all ground and naval gunfire must be general, applicable in all situations; and it should not be limited to a training manual of any one branch of the Army. A common procedure for adjustment of fires would of necessity include an explanation of this basic consideration in adjusting fires: that rounds can be most clearly sensed in relation to the target, and most accurately shifted onto the target, when they appear to be along the observer-target line. Initially, the problem is to obtain a round on that line; once on it, you make subsequent corrections so as to remain on it while bracketing the target. It should also be explained that in certain positions of the guns in relation to the observer, a deflection change in the line of fire may result in an apparent range change as the round is observed along the observer-target line, and a range change in the line of fire may result in a deflection change. For example, if the observer is well to the right of the guns, an increase in range will make the next round appear farther to the right while a decrease will make it appear farther to the left. Any simple, uniform, procedure for adjusting fire will give substantially these steps:

(1) Visualize the line of fire and the effect of deflection and range shifts upon that line.

(2) Visualize a yardstick, in hundreds of yards, in the target area.

(3) The previous two steps must be repeated with each round fired in adjustment. Ranging rounds may be requested to assist in accomplishing these steps. Ranging rounds consist of two rounds fired in rapid succession by one gun, the first round where you designate and the second at a 400-yard greater range. Unless you specifically request further ranging rounds, this method of fire is discontinued after the first two rounds.

(4) Now, in order to move the next round onto the observer-target line, use the first of the two ranging rounds as a basis for your shift. Determine whether a shift in range or in deflection at the guns will more clearly and certainly place the next round on the observer-target line and nearer the target. Estimate the amount of this single shift and transmit it to the firing unit. Shift one element at a time only, in this step, until a round can be clearly sensed on or near the observer-target line.

(5) Once on the observer-target line, the problem of keeping subsequent rounds on that line, while decreasing the size of the bracket, is a simple matter when your position is near the line of fire. However, when the guns are appreciably to your flank you must shift the deflection at the same time that you shift the range, or vice versa, depending upon your position. There are accurate means of computing these shifts. However, the following steps will give you satisfactory approximations: (a) select that shift, deflection or range, which will cause the succeeding round clearly to bracket

the target and estimate the amount of the shift; (b) estimate the amount and direction of shift necessary in the other element in order to keep the round on the observer-target line, and (c) transmit both of these shifts to the firing unit.

(6) If, in the course of the adjustment, you obtain a round so far off the observer-target line that you cannot sense it clearly, repeat step (4). When on the observer-target line, repeat step (5) until one round has effect on the target. Then request FIRE FOR EFFECT.

These are the only procedural steps which Training Circular 6 needs to make of it a real common procedure for adjustment of ground and naval gunfire. Their inclusion may appear superfluous, oversimplified, or misleading to the artilleryman. To the tanker, they may appear complicated until he has tried them. Without them the average tanker, trained only in direct fire, is lost in adjusting observed fires. In actual practice, although it would be desirable for all tankers to know this procedure in case of need, it is really only the tank company and battalion commanders and their staffs who need to know how to request and to adjust fires of another unit. This knowledge is invaluable to the tank unit in combat, since it serves to increase the power of the tank attack out of all proportion to the time necessary to acquire the knowledge.

The standard vocabulary and usage for fire commands and requests for fire, together with a standard procedure for adjusting observed fires, will go a long way toward solving the principal problems presented by individualism in gunnery. Replacement training and unit training will be simplified, made more effective and more lasting. Lack of understanding and misunderstanding in firing situations involving various units, branches, and services should become practically nonexistent. And as far as the tanker is concerned, it means one whale of a lot more fire power and oomph backing him up in all his combat operations.

State Rating Boards Authorized For National Guard Liaison Pilots

The Adjutants General of all States having Air National Guard units have been authorized to appoint aeronautical rating boards to examine applicants for the rating of liaison pilot.

The creation of these boards should make it considerably easier for former Army Air Force pilots to qualify as liaison pilots in the light aviation program of the new National Guard.

The State boards, which also will conduct flight tests, will consist of members from the Air National Guard units of each State.

Former Navy and Marine Air Force pilots must appear before a United States Air Force board prior to going before the State boards. Non-flying applicants may qualify by taking an eight-month course which includes five and one-half months at the U. S. Air Force Liaison Pilot School at San Marcos, Texas, and two and one-half months of operational training at the Army Ground Force Pilot School, Fort Sill, Oklahoma.

Ex-AGF liaison pilots can be commissioned in the Guard by having their rating card re-validated by the Chief of the National Guard Bureau and by meeting the usual requirements for Federal recognition.

Successful applicants will be commissioned in grades from First Lieutenant to Lieutenant Colonel, according to Table of Organization vacancies, and will be authorized up to 100 hours flying time a year in the new L-17 and L-16 planes.

National Guard liaison pilots receive the same flight and base pay for actual duty as do regular Army liaison pilots.

Delivery has been completed to the States on 47 L-17s, the new four-seated Navion, and 376 L-16s, the new two-seated Aeroncas.

At the present time there are 750 liaison pilot vacancies, of which only 231 are filled. When organization of the new National Guard is complete, there will be a total of 1,250 vacancies, and planes will be assigned to Army (ground) units of the National Guard on an equitable percentage basis.

Recently 60 Army Ground Force liaison pilots were assigned to the National Guard to assist the Senior Ground Instructors in the establishment of ground light aviation schools in each State authorized five or more liaison type aircraft. These schools will give operational training to former Air Force pilots who qualify as liaison pilots.

The AGF pilot advisers also assist the Senior Ground Instructors in matters of supply, maintenance, technical inspections and the screening of personnel.

The National Guard's liaison plane program offers full-time jobs, in addition to Guard service, for qualified mechanics and pilots.

National Guard liaison aircraft will also be made available to liaison pilots assigned to ground units of the Organized Reserve in order to insure the fullest utilization of aircraft.

Those interested in obtaining commissions as National Guard liaison pilots or becoming permanent caretakers should apply to The Adjutant General of the State in which they reside. The Adjutant General's Office is located at the State capital.

This Was The Cavalry

by Frederick Wilkins

The Sixtieth Anniversary of the Armored Cavalry Journal offers an appropriate moment to present this fine review of our mounted arm and its transition in modern warfare.

CALL the roll of the regiments. . . .

Say again the great names; list the battle honors; recall the famous mounts and be proud; for the sunlight falls dim on saber edge and polished harness; the bugle softly blows. The Army Boards are through now, their reports in, and the critics of the horse have had the last word: no more horse cavalry. There's plenty of armor —but no horses.

They've been getting around to it for a long time: ever since the tank came in military men have been saying the horse was on the way out, that cavalry was an obsolete Arm. This time they have made it stick—for a time. While there is sadness in the passing of something fine, of machines shoving aside the beautiful mounts, there is no shame, for the machine falls heir to a great name, and the wearers of the crossed sabers can look back on proud names, great deeds. . . .

During the first few years of our national existence cavalrymen had a pretty rough time. We fell heir to no mounted tradition, for British pluck and steadiness were manifest in Grenadier and Infantry of the Line, not a lot of men riding about on horses. Frederick had shown the value of horsemanship and the saber charge; the Austrians had proven the necessity of cavalry for reconnaissance, but the British and Colonials fought a long war almost entirely afoot. Cavalry is a costly service, and the colonists had little enough of that necessity of life, money. There were some small unit actions and fine leaders in the southern campaigns—"Light Horse Harry" Lee and Marion made names that have lasted to this day, but there were no great mounted contests. Washington decided on a reliable infantry, and his drill master, Steuben, concentrated on this Arm; his famous *Regulations* have almost no mention of cavalry, little of artillery.

Well, somehow we managed to win through. Today, in the business of being the greatest and richest nation, we forget that at one time we were one of several small and insignificant peoples. Whether rebel Colonials or Republican United States it was expensive to maintain an Army, especially a force strong in horses and cannon. The first years of the new Republic saw an Army of infantry regiments and a few guns.

By an Act of Congress, March 5, 1792, the first mounted unit in our national history was established. There was a major Indian problem at hand; France was a possible enemy; England not inclined to take independence seriously; but primarily, the Indian menace brought into being the new squadron. The unit was commanded by a major, and each of the four troops had a captain, a lieutenant, a Coronet, six sergeants, six corporals, one farrier, a saddler and sixty-five Dragoons. There must have been considerable discussion regarding wages, for the scale adopted could not have been chosen without considerable downward revision: the major received fifty-five dollars a month, and so down the line to three dollars for the privates!

Men were enlisted for three years. This was the first Regular Cavalry unit; despite almost impossible recruiting odds and the lack of care which has always distinguished the American people in times of peace, the squadron was enlisted, equipped and trained. The men

had beautiful brass helmets and horsehair plumes, the only helmeted force in our Army. The Dragoons were with Wayne at Fallen Timbers and served gallantly in that battle, as in many less famous frontier skirmishes. Their period of service was brief, but no finer body of American troops have ever worn the uniform than the men of the first squadron. They were Regulars in the finest sense of the word.

In 1802 a grateful nation showed its appreciation by disbanding the squadron. For one thing we were broke, and what money we had was being spent on naval construction and the war with the Barbary pirates. During the following years we didn't quite know what we wanted, or needed. By 1808 some people thought we should have *some* cavalry, and a Light Dragoon regiment was ordered organized, but they had to serve as light infantry until enough money was available to buy horses. So, we had cavalry of a sort when the second English war came along. British cavalry was little better than it had been in 1775, and ours was worse. As far as mounted combat went 1812-1815 was a barren war. It is interesting to think what service could have been made of the superb units of the old Dragoons.

Very likely their main use would have been that of other cavalry units—in 1815, at the end of the war, an economy wave washed out everything in the Army except a few infantry and artillery regiments. For the next few years the Army managed without the mounted man. The years from the War of 1812 to the outbreak of the Black Hawk War were about as dreary as the Army ever endured. Such activity as there was was almost entirely devoted to sea and river improvements and to border fortification. An obscure lieutenant named R. E. Lee was engaged in some of this work and kept right on superintending the building of forts when the Indian trouble flared into the campaign know as the Black Hawk War.

It is recorded that a certain Abraham Lincoln raised a militia company and was sworn in as a captain by a Regular lieutenant named Jefferson Davis. Quite a considerable force was engaged before the trouble was done, and it was plainly shown that any Indian campaign required horsemen. A battalion of Mountain Rangers was recruited, but the idea of Regulars acting as partisan troops didn't jell; for one thing the choice of a commander was poor.

Finally, on March 2, 1833, the American Cavalry Service was born, for the Arm and the unit created were in service until the Army reorganization following World War II. The Regiment, the First Dragoons, was somewhat similar to the first squadron, but larger, having ten companies. The grade of Coronet was abolished for mounted units and Second Lieutenant substituted. Pay was increased to six dollars for private soldiers. Henry Dodge was the first Colonel, with Stephen Kearney as Lieutenant Colonel; Jeff Davis was a Lieutenant, and Adjutant of the Regiment for two years.

Immediately the First Dragoons began those long plains marches that were to be the stock in trade of mounted regiments. Already we were straining against the boundaries of the Louisiana Purchase; there were vast lands—providing the Indians were reasonable—for the taking. Almost before it was a regiment, the First was on the march, overawing the Indians. In their first months the Dragoons covered hundreds of miles in all kinds of weather, lost over a hundred men by sickness and exposure, but had a most calming effect on the natives west of the great river.

In May, 1836, another regiment of Dragoons was raised. This unit went to Florida and fought through the long Seminole campaign, while the First stayed on the Plains. During this period and through the Mexican War the men of the Dragoons wore a dark blue fatigue jacket trimmed in yellow lace; their trousers were sky blue with reinforced seats and a double yellow stripe up the leg; a flat topped forage cap was worn, also trimmed with a wide yellow band. Officers wore a silk sash of orange hue, while noncommissioned officers had yellow worsted sashes. There was a snappy dress uniform, but very seldom did the Dragoons find time for anything but field clothing.

For our third war we entered battle with a fine cavalry force, which was a good thing, as the Mexican theater was ideally suited to mounted action, the Mexicans skilled horsemen. The Mexican War and the following Indian wars would do much to develop the type of mounted action that would be the characteristic form of combat for American cavalrymen in the years to follow.

This is the story of the mounted units of the Regular Army, but that story is largely told in relation to the men they served with and against; one of the influences was the volunteer regiments of Texas Rangers. There were other volunteer cavalry units, but the Rangers had a special flavor that has never been equalled: their ability in getting into trouble was exceeded only by their skill in getting out; their marvelous combat record was exceeded only by their horrible showing as garrison troops, and their natural dash was well combined with an imposing array of firearms. The Rangers were the first military unit to employ the new Colt Revolvers and brought mounted fire action to cavalry combat, a lesson that they had learned in their Indian battles.

From the Rangers the Regulars learned to combine partisan dash with cavalry steadiness; they saw the value and necessity for revolvers and firing from horseback; a Ranger used a horse as a means of locomotion and could fight as well dismounted as when in the saddle. This lesson of lightness and dash was further emphasized in combat with the Mexicans, who charged as lancers in regular formation and acted as guerrillas in the brush.

These guerrilla actions cost many lives and began the war in an unfavorable light, when an American detachment of the Second Dragoons was cut off and forced to surrender. This did nothing to add to the reputation of the Regulars, but their day was at hand. Taylor didn't care too much for the Texans but used

them for reconnaissance and security; the Dragoons were held back for battlefield employment.

They showed what they could do at Resaca de la Palma. Captain May and a squadron of the Second Dragoons made one of the celebrated charges in cavalry history and had a large part in deciding the final outcome. Taylor's men had been taking a pounding from a Mexican battery sited across a ravine in a most commanding spot. May and his Dragoons were ordered to clean out the position. Following a covering fire from friendly guns, May led his men in a saber charge that overran the enemy cannon and engaged in a wild melee in the enemy lines, throwing a section into confusion and taking pressure off the attacking Americans. They fought back and forth, taking the Mexican commander prisoner before fighting their way clear and riding back to their own lines.

From that day the prestige of the Dragoons was secure. Their following service, while offering no equal opportunities, was more than good. In the meantime a Regiment of Mounted Rifles was raised; unfortunately all their mounts were lost in the Gulf of Mexico, and they served out the war as infantry. The First Dragoons had no chances for combat, but they performed prodigious marching feats, crossing overland to New Mexico; parts of the regiment went on to California with Kearney, assisting in the conquest of that territory by a mixed Army and Naval force.

Due to the experiences of the Mexican War revolvers were issued in some quantity to the Dragoons, the famous Colt "dragoons" of 1848. The spoils of war ranged from Texas to the Pacific—wonderful cavalry country, all Indian country. The rides the Dragoons and Rifles made in the next few years would fill volumes: there was Oregon; there was extensive mapping in the Western Plains, explorations in the Rockies. There were a thousand and one Indian fights.

And there was a crying need for more horsemen!

A one-time cavalryman, Jefferson Davis, was Secretary of War, the same who had been adjutant of the First Dragoons. There was no need to sell him on the idea of horsemen; he pushed through the creation of two new mounted regiments, the First and Second Cavalry, in 1855. The law was such that he was able to establish two *Cavalry* regiments without regard for the seniority of the Dragoons and Mounted Rifles, a fact that caused much ill will and the later claim that he filled the new positions with Southern officers. Whatever the story we now had Dragoons, Mounted Infantry and Cavalry, in the best European style, though the actual distinction was largely one of name.

A dragoon was supposedly a horseman who could fight afoot if necessary; a Mounted Infantryman fought only afoot, while a Cavalryman was only to engage in combat while mounted. Actually all of them fought afoot or dismounted. Dragoons were generally armed with pistol-carbines, sabers and musketoons, or carbines. The Mounted Rifles had no sabers and generally fought dismounted; however, they could fight mounted, as they had the heavy Colt Dragoon revolvers, as well as percussion rifles. Cavalry regiments used the Colt "Navy" revolver, sabers and carbines.

The uniform was basically the same, though the trimming varied with the regiment: Dragoons wore orange; the Riflemen green, while Cavalry regiments had yellow. As an additional glory the Dragoons and Rifles had the "Albert hat," a gaudy affair with green and orange pompoms. In this period, Captain McClellan invented the saddle that was to bear his name and remain in service as long as the cavalryman himself.

The two new regiments had a hard life ahead of them, and fine men were chosen to lead them. Their officer rolls read like a roster of Civil War generals. Lee was Lieutenant Colonel of the Second Cavalry, the most famous of the officers, but there were others who were better known at the time; few of the lieutenants failed to wear stars in the struggle ahead. It is doubtful if two regiments in any Army ever contributed so many general officers as the First and Second Cavalry.

This was all something in the future when the regiments were formed; other than the usual wishing of a junior officer it is doubtful if anyone gave any thought to what was ahead. The Second Cavalry left Jefferson Barracks late in October and marched to a new station in Texas. Seven hundred and fifty strong they moved through the very heart of the Indian Territory in an impressive display of power that was not lost on the red man. In the next five years cavalrymen would fight Cortinas along the Mexican border, wage a desperate winter campaign against the Mormons, fight Indians in New Mexico, Texas and Oregon, plus the thousands of miles of patrolling and mapping that was classed as routine.

A typical incident happened along the Snake River in 1858, when three companies of the Dragoons and a company of the Ninth Infantry were almost destroyed by Indians. A column came to avenge the defeat and rode for *twenty-eight* days before running the Indians to earth at Four Lakes. This fight proved again that the revolver and carbine were the weapons for the West; the saber began to play a smaller and smaller role. European distinctions between heavy and light cavalry, cavalry and dragoons had no meaning at all on the Plains.

There were other duties for the cavalryman. The deserts and semi-arid Southwest suggested to certain military minds the use of camels as a means of mounting our forces in the desert. A cavalry company at Campe Verde, Texas, was selected as the unit to test the American Camel Corps; a string of camels was assigned to the unhappy troopers. Knowing nothing about handling, packing or riding camels, the men made somewhat less than a glorious success out of the experiment. Contemporary accounts say that the animals had wonderful possibilities if properly handled, but the animals were turned out.

There was too much brewing for men to worry about a few camels; the Civil War was in the making and

officers and men began to take sides: the mounted regiments went about like the rest of the Army, with the bulk of the enlisted men staying with the colors and the officers splitting north and south. The Second Cavalry —what was left—marched through Texas to the Gulf and sailed for New York. The other regiments assembled in the north and began rebuilding, trying to find new officers.

A new regiment, the Third Cavalry, was organized, but other than this little attention was paid the Regular cavalry. Cameron, Secretary of War, didn't believe that mounted men could operate in the East and wouldn't activate any more units, refusing the offer of many volunteer regiments from the states. Despite his poor management and judgment many regiments were mustered into service. For some time, however, the Union forces were almost without mounted units. Bull Run was fought with a handful of men from the Second Cavalry; these, along with Syke's battalion of Regular Infantry, were the only troops to stand firm when the disaster came and the famous run from the battlefield began.

In August, 1861, all mounted regiments were reorganized and designated cavalry. The First and Second Dragoons became the First and Second Cavalry; the Mounted Rifles became the Third Cavalry; the First and Second were now the Fourth and Fifth; the new Third was renumbered the Sixth Cavalry; all these designations held until the present. During the war six colored cavalry regiments were raised, as well as over two hundred volunteer regiments.

Search the pages of history and you will find no finer horsemen than the cavalrymen of the American Civil War. The distinctive character of the American cavalryman was fully developed during the Rebellion; while it never befell the lot of the cavalryman to engage in mounted combat against a civilized foe after this struggle, there is no doubt that the local boys would have given a fine account of themselves.

In the beginning the Rebels had a great advantage: cavalry is an arm that requires superb leadership, both on a unit level and from the high command, and the Rebs had a great initial advantage in command. They also had better mounts and men better trained for mounted action. While the Regular regiments were all in Northern service, they were spread pretty thin in training and organizing the scores of volunteer units. Under Stuart and Forrest, the young Lees and many more the Confederate regiments performed remarkable feats of marching and battle. Stuart's famous march around the Union Army is the best known example, but there were others.

Both sides imported foreign cavalry experts, but their influence wasn't lasting. It is little known that each side established lancer units, and these forces even engaged in combat on a limited scale, but the weapon was foreign to American hands; men who preferred the revolver to the saber couldn't see any advantage in the lance.

Tactics were undergoing a constant change. Southern units had started the war as firm believers in mounted fire actions; according to European standards they were really mounted infantry, not cavalry. Most Europeans, especially the Prussians, took a slighting view of the Civil War and looked down their noses at our cavalry, but they never had to engage in combat with them. Both sides employed the revolver more and more. In 1863 Stuart tried to stop this habit and told his men to employ the saber in the charge, using the revolver only when dismounted, or when the enemy was behind an obstacle.

It takes much practice to make a good swordsman, more for a lancer, and firearms, especially in a melee, are not too effective. A small action in 1864 illustrates this fact in the pointed way war brings out such lessons. A hundred Federal troops armed with sabers and carbines ran into about the same number of Mosby's partisans armed only with revolvers. One Rebel was killed, but twenty-four Union troopers were slain, twelve wounded and over sixty captured. When men could do this with a revolver they weren't about to draw a saber.

It wasn't until 1863 that Federal cavalry began to make a show. That year the Cavalry Corps of the Army of the Potomac surprised the great Stuart at Brandy Station and fought him hammer and tongs. While they were finally driven from the field the Union troopers found the confidence in themselves and their leaders that had been lacking. From then on the Southern leaders had to count the Union horsemen in every battle; no longer would Stuart have his own way.

It was Union cavalry under Buford that dismounted in a critical moment at Gettysburg and helped save the day. Rebel cavalry often fought afoot, for the use of the new breech-loading carbines made cavalry effective when dismounted. Leadership on both sides discovered more and more about cavalry combat, and the size of the units grew, first to divisions, then to corps.

When Grant took over command of the Union Armies he appointed Sheridan as commander of the cavalry, and the end was in sight, By now the largest bulk of the mounted men were well trained and had a commander who was a skilled cavalryman *and* a general. Their horses were fresh, their numbers limitless, their equipment far better than the Rebels. At one time the Federals had to fear the fast moving clouds of dust that meant Stuart's cavalry; now the blue-coated columns circled the ragged, tired remnants of a proud army that moved slowly southward from Richmond. It was the ceaseless hammering of Sheridan's horsemen that finally closed the war and cut Lee from all hope. And it was a determined Sheridan and a cocky kid general named Custer who demanded the surrender of what was left of the Southern forces, but that went otherwise and the cavalryman didn't have the honor of taking the final surrender.

The volunteer regiments raised during the war went back to their several states and became the basis for later National Guard units. Regular regiments went South, then West, and started fighting Indians, build-

ing railroads, mapping and exploring, about where they had left off in 1861. It would be a long, dreary time before the Army rose again. By law the force could not exceed 25,000 men, and there were times when little over half that number were on the rolls; there were times when no money was at hand for pay, and there were any number of times when there were 300,000 Indians on the Plains.

All the men in the Indian fighting Army gave a great account of themselves, but due to the nature of the ground most of the burden fell on the yellow legs. In 1868, Custer, leading a new regiment, the Seventh Cavalry, made an epic winter march and won a victory over the Indians at Black Kettle. It was Custer and a large part of the Seventh Cavalry that took part in the most famous Indian fight of the West eight years later at Little Big Horn. Not a single man lived through the fight—in fact the only living survivor of the companies with Custer was a horse.

An impossible situation had been handed the Army. Portions of the Third Cavalry engaged in another winter campaign in 1868 and broke another tribe—for a time—but 1,200 horsemen and 1,400 infantry can't cow 300,000 people.

The Second Cavalry fought in Montana; the First, Third and Fifth fought in Arizona and supposedly had the Apaches cowed; the Sixth campaigned along the Red River; there were troubles in Texas and along the Rio Grande. From 1869 to 1875 there were two hundred and three separate engagements, most of them involving cavalry. The big Sioux wars of '76 saw the Seventh, Third, Second and Fifth regiments in action.

But it was again in Arizona that the cavalryman had his hardest time; of all the tribes fought the Apache was the toughest, had the roughest terrain for a battlefield and the advantage of skipping across the border when close-pressed. It became necessary to engage friendly Indians to combat the renegade tribes, and we had our first native cavalry. This worked well in Arizona, but efforts to raise Indian regulars elsewhere failed completely. A number joined the cavalry, but absolutely refused to have anything to do with infantry or artillery. They couldn't stand the discipline of Army life and deserted.

But in Arizona they were able to dress as they pleased, had a few famous scouts to lead them and played a major share in cleaning up the Apache trouble and running Geronimo to earth. The Indian troubles gradually ended, basically because the frontier was pinched out between the advancing railways, telegraph, and the spread of rancher and farmer.

In the 1880's the Army began changing, expanding, thinking of warfare in terms of European foes. In 1883 Cook's new cavalry regulations were adopted; for the first time the designation "troop" was officially used. They still had the saber, but the revolver and carbine were the weapons that decided battles. Though small, the regiments were the equal of anything in the world.

When war with Spain became a reality the bulk of our cavalry regiments went to Cuba, but they went as infantry; only a few horses were taken with each unit. The mounted regiments were formed into a separate division of three thousand men and fought at Kettle Hill, or San Juan, as it is now known. Just as would their grandchildren they struggled through tall grass, between trees, fought fever and snipers. When the impetuous volunteers of the Rough Riders got in a tight spot it was a colored regiment of Regular cavalry that came along and helped them out. Cuba proved the adaptability of American cavalry.

World War I came along, but the story was a bit different. Despite popular belief cavalry actions in that war fill a thick book, but they are not American actions. Our mounted regiments patrolled the border, where they saw plenty of action, or waited in the Islands, but there was no action in France.

Intervals between World Wars saw a swing from position warfare: cavalry had never been whipped—it was merely waiting for the breakthrough. Military men were going to show what the horse could do. In the meantime the tank was being perfected; the airplane became a deadly weapon; the gasoline engine became the means of movement; strange new phrases like lightning war and armored force and mechanized armies became popular.

The cavalryman tried to keep abreast. He added motorcycles and more machine guns, scout cars and mortars; armor was introduced and mounts were carried in large trailers. Part of the old regiments were converted to armor in the Seventh Brigade, Mechanized, the origin of our Armored Force. It looked like we had a correct answer: we had a nice blend of horse and machine, something for every terrain.

In the Louisiana maneuvers of those long ago prewar years the famous First Cavalry Division made a wide flanking march and captured a gasoline dump, left an armored division mired for lack of fuel. Military men said "see there" and recalled the days of Stuart. But that was about the end—the horse didn't quite make it. The formal close-out came with the action of the 26th Cavalry Philippine Scouts. Other horse actions in the war were of a provisional nature insofar as concerned the U.S. Army. The First Cavalry Division went to the Pacific Theater as a dismounted unit to acquit itself with distinction.

The Second Cavalry Division went out of business in Africa in early 1944, remolded into service elements with the bulk of its officers detailed and assigned in infantry.

The cavalry had undergone logical progression into mechanization and armor. Events proved the soundness of the decision to dismount or disband our mounted forces. What will happen tomorrow is a guess, but today the standards are furled; the blare of the bugle is drowned in the roar of engines and the clanking of tank tracks. But the story is still there in the battle honors and in the hearts of men.

The Military Stakes

*by Colonel Hamilton H. Howze**

ON 25 and 26 November, 1947, the Military Stakes Competition was instituted at The Ground General School. On those two dates, the members of the Officers' Basic Class competed. As a result of the success of this competition, it was decided that the same test (with modifications only to prevent the future competitor from taking advantage of information he may have gained from a description of a previous competition) should be given to each army officer candidate class at The Ground General School. Accordingly, Army Officer Candidate Class No. 15 competed on 12 December.

The Military Stakes is the modern successor to the Standard Stakes, a tradition of The Cavalry School at Fort Riley for nearly 25 years. Before the war, the Standard Stakes was primarily a mounted competition, requiring the contestant, riding a succession of horses, to negotiate a course of jumps, to take a cross-country course, to run a mounted saber course, and to carry a polo ball (in the usual manner with a polo stick—not in his pocket) for the length of a polo field, all in a wild race against his competitors. Additionally, each officer had to demonstrate his marksmanship with rifle and pistol, and his ability at foot-racing. The old Standard Stakes required each contestant to produce a dollar bill as his entry fee and the "stakes" were run winner-take-all.

The present-day Military Stakes derives its general theme—a race with a series of tasks to be performed during the course of it—from the old Standard Stakes. A maximum of 25 contestants can be handled on the Military Stakes Course in one heat; for the Officers' Basic Course, a total of eight heats were run, and for AOC 15, two heats. Trophies were presented to the winner of each heat, and for the Basic class, to the over-all winner.

The course is about two miles in length, and contains 33 stations, as indicated by Figure 1. Since it is the purpose of this article to be definitive, each of these 33 stations is described in brief herewith.

No. 1—Contestant must negotiate a vertical concrete wall about 6 feet high. Maximum score—10.

No. 2—Contestant, given a map of Fort Riley and vicinity, is required to orient it by observation of terrain features in the vicinity. Maximum score—15.

No. 3—Contestant finds a carbine disassembled; he must assemble it, put it in firing order, and break a balloon 100 yards distant. Fifteen rounds tracer allowed. Maximum score—30.

No. 4—Contestant must identify a military combat aircraft flying overhead, and determine its altitude. Maximum score—20.

No. 5—Contestant must locate North on an aerial vertical photograph, basing his judgment on shadows. Maximum score—15.

No. 6—Contestant finds a rifle disassembled; he must assemble it, put it in firing order, and break a balloon 200 yards distant. Sixteen rounds tracer allowed. Maximum score—35.

No. 7—Contestant finds a light machine gun disassembled; he must assemble it, put it in firing order, and break a balloon 300 yards distant. One hundred rounds tracer allowed. Maximum score—35.

Assemble the light machine gun.

Fire at the balloon numbered to correspond to your number until balloon is hit or ammunition is expended.

No. 8—Contestant, confronted with a stack of basic military supplies (clothing, rations, ammunition, lubricating oils, engineer supplies, etc.) must place these supplies at stakes which indicate classification, I, II, III, IV, or V. Maximum score—20.

No. 9—Contestant is confronted with a ¼-ton truck not in running order; he is required to put it in order and drive it twenty feet, over a white line. This station tests automotive trouble-shooting ability, plus an understanding of driving technique. Maximum score—35.

No. 10—Contestant is required to lay an aiming circle on Magnetic North. Maximum score—20.

No. 11—Contestant must identify, on a sky chart, the North Star. Maximum score—15.

No. 12—Contestant must carry a 60mm mortar over a 15-foot bank, and lay it, according to certain data,

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on an aiming stake. Maximum score—20.

Carry the mortar to the far side of the embankment.

Set up the mortar at your spot marker on the taped line; lay the mortar, using any one of the aiming stakes in front of the line, for Deflection Left 20, Range 800 yards.

No. 13—Contestant selects, from a number of pieces of equipment, those items necessary to carry on an engineer road reconnaissance. Maximum score—20.

No. 14—Contestant, provided with a compass, determines which of four arrows points at a designated magnetic azimuth. Maximum score—20.

No. 15—Contestant assembles, but does not fire, a pistol. Maximum score—20.

No. 16—Contestant, confronted with a common type road and provided with a tape measure, is required to determine the military classification of that road. Maximum score—20.

No. 17—Contestant comes upon a small tableau representing what a patrol leader might come upon in the course of a combat action. He must observe carefully this scene, and then, at a point 50 yards away, must answer five questions testing his capacity of military observation and memory. Maximum score—50.

No. 18—Contestant attempts to hit with practice hand grenades three targets, representing the open hatch of a tank turret, a foxhole, and a window. Maximum score—20.

No. 19—Contestant climbs over a net similar to landing nets used on shipside of an assault transport. Maximum score—15.

No. 20—Contestant, with available dummy TNT blocks, fuses, caps, and tape, must place this material to cut a timber. Maximum score—20.

No. 21—Contestant, faced with four different types of ammunition (105mm HEAT; 75mm Gun HE, super-charge; 81mm mortar HE, heavy; and 81mm mortar HE, light) plus a map indication of what target he must engage from a gun position corresponding to his own position, is required to select the one round which will effectively engage that target. Maximum score—20.

No. 22—Contestant sees an antitank mine field laid out on the ground; he must detect the error which has been made in the set-up of it. Maximum score—20.

No. 23—On a scale model bridge, contestant must select the proper nomenclature for certain vital parts. Maximum score—20.

No. 24—Contestant must cross a deep, muddy creek by means of a 1½-inch rope suspended from bank to bank. Failure to accomplish this carries a penalty of its own. Maximum score—25.

No. 25—Contestant must hook up a field telephone and proof his job by calling a switchboard. Maximum score—20.

No. 26—Contestant must cross a creek on a narrow log, and then, with the aid of a rope, pull himself up a near-vertical bank about 14 feet high. Maximum score—20.

No. 27—With the aid of a map, contestant must determine elevation of a certain point on the ground indicated by a flagpole. Maximum score—15.

No. 28—With the aid of a map and compass, the contestant must determine polar coordinates of the same point on the ground. Maximum score—15.

No. 29—From a picket line containing a number of horses equipped with bridle and halter shank only, con-

testant must select one and deliver it to a point about 500 yards distant, on top of a hill. Penalty assessed if horse is not ridden, and time is also lost. Maximum score—15.

No. 30—Of three light tanks positioned to engage a designated target, contestant must select that one in proper defilade. Maximum score—20.

No. 31—Contestant sees an artillery round (represented) falling and is required to select the correction necessary to cause the next round to hit a prescribed target. Maximum score—20.

You are an artillery forward observer. You have located an Aggressor S P Gun (indicated by the white target to your direct front) and are adjusting on it. The round you see falling in the vicinity of the target is yours. The battery is located to your right rear. Indicate the correction you would give to place the next round on the target.

a. Right 200, repeat range
b. Left 200, add 100
c. Repeat deflection, add 200
d. Right 100, add 200

USE ANSWER BOARD

No. 32—Contestant is required to lay a battery commander's telescope on a base point indicated on a map. Maximum score—20.

No. 33—Contestant must identify a radio according to its military characteristics. Maximum score—15.

* * *

Each station is arranged so that:

1. Each contestant finds a small numbered sign corresponding to his own number, and pinned to his number sign is a card giving him brief but very clear instructions as to the task he must accomplish at that station.

2. No contestant is held up by crowding by other contestants.

3. No difficulty is encountered by a contestant in finding his way from station to station: pathfinding does not enter into the competition. Tapes and directional arrows make the way clear.

4. No equipment is required to be carried by the contestant.

5. No writing is required.

6. No verbal instruction to or verbal report by the contestant is required.

* * *

All contestants of a heat start simultaneously, so that each contestant must race other students as well as against time. An individual score is kept for each contestant at each station, and an over-all course time for each is also taken.

The maximum over-all score is 1000. The 33 stations listed above have a total of 700 points maximum score; the remaining 300 points maximum score is allotted for time. Each station has a maximum and minimum score, which last is O. For some stations, a partial score is possible: for example, the contestant is awarded 15 points for assembling his rifle, and an additional 20 points for breaking a balloon with it. If he fails to clear his rifle at the completion of his firing, he is assessed a 5-point penalty.

Forty-five minutes for the course at Fort Riley was selected as an impossible time, and a 4-point penalty is assessed for every minute used by the contestant above 45 minutes. The fastest time made by any one of the 209 contestants so far competing was just under 50 minutes. So that the course might be put in shape for the next heat, one hour and 45 minutes was the maximum time allowed to run it, and it was occasionally necessary to shoo off the course a contestant taking more than that amount of time.

Certain administrative matters must be considered in setting up a competition such as this. Some of these are: an announcer system to describe the contest to spectators, timers, safety officer, ambulances, and range guards; a fire-fighting detail in dry weather (tracers cause lots of fires); military police to handle traffic, parking, and to control spectators; numbers for contestants, made of canvas and with a safety pin at each corner.

Ample time must also be allowed for construction of necessary material. The "spot" signs are constructed by spot welding light metal plate to rods taken from ammunition clover-leafs. Station signs and answer boards are constructed of wood. Enough extra items should be made to take care of breakage. Storage of this material should be arranged, since it can be used again and again.

Each station has score sheets which are made out in duplicate, and when the last man in each heat passes the station, are delivered to the scorekeeper by special messenger. The scorekeeper (who is not the scoreboard operator) is thus able to keep a running total on each contestant, and the winner of each heat is announced within ten minutes of completion by the last man.

The course is clearly marked by utilizing a number of yellow directional arrows, and by taping a lane wherever necessary. The tape on the right is marked by green swatches, the tape on the left by red swatches.

A scoreboard, supported by an elaborate communications system, indicates the location of each contestant while he is on the course and further indicates whether he passes each station with or without penalty.

Just prior to the running of the course, it is necessary that contestants be oriented verbally as to the general

layout of the course, meaning of "spot" signs, use of answer boards, safety precautions, etc. This orientation requires about 15 minutes.

Contestants are required to wear light fatigue clothing and combat boots. They are permitted to wear headgear of their own choosing. They are not required to carry any equipment.

Since it is not desirable that a leading contestant be held up by reason of firing by others lagging behind, the course is laid out to obviate such delay. Note in Figure 1 that the firing stations all come early: 3, 6, and 7. The course then bends back away from Station No. 7 in a long loop crowded with a number of time-consuming stations. Because of this device it was never possible for the leading contestant to get as far as Station 21 before all firing was completed on Station 7. After the last contestant completes firing on Station 7, the safety officer fires a green flare and pulls down from a small flagpole a red flag, substituting for it a white flag. On this signal, personnel manning and controlling stations down-range (23 through 32) are able to come out from cover and man their stations well in advance of the arrival of the leading contestants.

The balloons used in firing stations are ordinary red or black toy balloons, filled with hydrogen. Each balloon is tied to a stick or board with a string about six inches long, which is enough to make the balloons bob very considerably in the light wind which is usual. Occasionally a balloon breaks accidentally—this makes it necessary to provide in advance a number of extras, tied to long poles. When a balloon breaks, a man in the pits is telephoned to hoist one of the substitute balloons behind the proper target number.

The course at Fort Riley is particularly adaptable, since it is built around a rifle range. The rifle range permits safe firing by three weapons simultaneously, and it is not necessary that all firing points be abreast, since high earthen banks partition the range into three parts. This area is also appropriate by reason of a number of surrounding hills, a moderately large creek, a storage range house, and good access roads.

* * *

The reaction of contestants who have run the course thus far has been almost uniformly favorable. Of a large number questioned, none indicated a serious objection to the course; all stated that it was a strenuous but instructive test; none objected on the basis that he was placed on unfamiliar ground. The event is adaptable to all kinds of weather, with the exception of heavy fog, or rain or snow actually falling. The competition for AOC 15 was run at a temperature of about 25° and in six inches of fresh snow.

The Military Stakes, although not an excessively difficult physical test, does put the contestants under a fairly severe mental and physical pressure. It was noted at stations occurring late in the course that contestants moving in the leading half of each heat were generally the most alert and accurate in their actions at those stations. Contestants arriving among the last in each heat were comparatively careless and inaccurate, due to obvious fatigue.

Such a competition is very illuminating in pointing up training deficiencies among the contestants. In it there is no possibility of misunderstanding of verbal instructions, since there are no verbal instructions. All requirements are eminently practical, and the battlefield necessity of the knowledge involved is easily demonstrable. Students are much impressed by the positive proof that they can, or cannot, read a map, fire a weapon accurately, lay a mortar, fix a jeep, or do any of the many other tasks involved. Other units may use this type of course to advantage.

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Armored Cavalry Journal

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Report of the Annual Meeting of The Armored Cavalry Association

PROCEEDINGS

The 59th Annual Meeting of the Armored Cavalry Association (formerly The Cavalry Association) was held Monday evening, January 26, 1948, at the Army-Navy Club in Washington. Present were twenty members, while 438 additional members were represented by proxy cards.

Major General I. D. White, President of the Association for the year 1947, presided. Opening the meeting General White introduced the subject of the reading of minutes of the previous meeting, which was waived in a motion from the floor. Colonel Edwin M. Sumner, Secretary-Treasurer, then read the Financial Statement (see below), following it with a brief summary of the year's activities. The statement was accepted and the meeting proceeded to the election of officers for 1948.

A suggested list of candidates was drawn up and voted upon by means of secret written ballot. Major General Ernest N. Harmon was elected President, and Major General Hobart R. Gay was elected Vice President.

The nine-member Executive Council was elected with an eye to balance, and the result was attained through a broad interpretation of the Constitution of the Association in relation to location of candidates, which permitted acceptance of candidates within reaching distance of Washington rather than just within the city. The elected body includes representatives of a large segment in the Armored field, and National Guard and Organized Reserve have their members.

The election of officials was followed by an appraisal of activities for the forthcoming year, in order to perpetuate the service of the Association and its JOURNAL to members and readers.

General Henry introduced a motion from the floor for expressions of thanks to outgoing President General White for his efforts on behalf of the Association and his time and trouble for the long trip from Fort Riley to attend executive sessions; to outgoing Vice President General Holbrook for his personal interest in making himself available on numerous occasions in transacting Association business; and to Major Hal D. Steward, outgoing Associate Editor, for his valuable work on the JOURNAL during the period of his editorship.

Colonel Seone spoke of the forthcoming visit of veterans and other interested persons to the Santiago battleground, and the 59th Annual Meeting of the Armored Cavalry Association was adjourned.

FINANCIAL STATEMENT

FINANCIAL STATEMENT FOR THE YEAR 1947

Department	*Receipts*	*Expenditures*
ARMORED CAVALRY JOURNAL	$ 8,683.68	$ 7,082.92
Book Department	4,662.35	4,339.43
Armed Forces Digest	131.78	.....
Rent and Rental Expense	900.00	1,832.10
Interest on Securities	174.03	.....
Eleventh Armored Division Association	5,598.74	2,781.94
Miscellaneous	892.44	829.79
Stationery and Postage	.....	1,036.93
Salaries		2,880.15
Social Security Taxes		67.86
Withholding Taxes		472.30
Insurance		30.54
Janitor		61.00
Office Supplies		513.41
Telephone and Telegraph		307.32
Bank Balance as of January 1, 1947	2,796.49	
Bank Balance as of December 31, 1947		1,563.82
	$23,799.51	$23,799.51

ASSETS

Bank Balance—December 31, 1947		$ 1,563.82
Stock on hand:		
November-December Journals	12.00	
Office Supplies	250.00	
Chamberlin Books (Riding & Schooling Horses: 2560 at 2.40 minimum val)	6,144.00	
Chamberlin Books on consignment (50)	170.00	
Assorted Books	15.00	
Government Printing Office Deposit	27.61	6,618.61
ACCOUNTS RECEIVABLE		
Subscriptions		
167—12's Due Oct 1, 1947	501.00	
365— 2's Due Dec 1, 1947	1,095.00	
90—Bulk (Due bimonthly)	270.00	
Book Department	484.88	2,350.88
SECURITIES		
12 Shares A. T. & T. CO.	2,040.00	
12 Bonds A. T. & T. CO.	200.00	
2 U. S. Government Bonds	2,000.00	4,240.00
OFFICE EQUIPMENT		
Depreciated Value (5%)		1,511.85
TOTAL ASSETS		$16,285.16

LIABILITIES

ACCOUNTS PAYABLE		
Office Expenses	$ 246.66	$
ARMORED CAVALRY JOURNAL	973.07	
Book Department	1,214.03	2,433.76
PREPAID SUBSCRIPTIONS		
408— 4's 1 issue	130.56	
314— 6's 2 issues	200.00	
425— 8's 3 issues	408.00	
464—10's 4 issues	593.92	
300—12's 5 issues	480.00	
295— 2's 6 issues	566.40	2,379.84
TOTAL LIABILITIES		$ 4,813.60
NET VALUE OF ASSOCIATION—Dec. 31, 1946	10,688.29	
NET VALUE OF ASSOCIATION—Dec. 31, 1947		11,471.56
NET GAIN—VALUE OF ASSOCIATION FOR 1947		$ 783.27

Armored Division Associations

SHOULD THE ARMORED DIVISION ASSOCIATIONS BE ABOLISHED?

by Major Charles W. Walson, Cavalry

[Editor's Note: In recent weeks there has been much talk concerning the effectiveness of Division Associations acting individually, and the possibility of combining all Armored Division Associations into a united group within which the individual organizations would retain their respective identities while operating for the general good. Major Charles W. Walson, an instructor in the Reserve Training Program, was one of the first to sum things up in a written appraisal. In the interest of provoking thought on the subject and getting an expression of opinion from various sources, we are sacrificing the usual News Notes in this issue, and in their place we are offering Major Walson's ideas. Comment is requested and will be appreciated.]

VERY recently I was informed that the Third Armored Division, to which I was assigned for a short time in combat, was forming an association. Remembering the friendships I had made while I was a member of the Third Armored, I was eager to join and relive the few months when I was in this division, as well as to renew past friendships.

However, I have had some doubts as to the advisability of an association of this nature. I am sure that my ideas are not original, but I have not seen them expressed in print, and I thought that perhaps a review of the purposes and future of the division associations would be useful at this time. I have half convinced myself that these division associations should be abolished and, without wishing to tilt at windmills, I would like to state my reasons for such a conclusion and present a possible solution.

In the first place, the division associations are generally organized for the purpose of maintaining *esprit de corps*, reliving the past, continuing old friendships, and aiding those members who are in need.

Now, what is the immediate reaction of someone who is *not* a member of such an association? Isn't it closely akin to the attitude that was expressed by many officers during the war when they discussed the mythical WPPA (West Point Protective Association)? Aren't we opening ourselves to charges of forming cliques? Isn't the charge of favoritism within the army a possibility that we should consider?

The army hopes to commission many regular officers through its competitive tours. At this time many ROTC graduates are ex-servicemen. In a competition between an association member and a non-member, would the association member be favored by a rating officer of the same association? We, ourselves, are sure that each man would be judged on his merits, but what defense would we have against such charges?

These ideas sound ridiculous at first, I am sure, but wasn't the fuss raised in the navy concerning the Green Bowlers quite similar to one which might be raised about our purely social organizations?

Is an association which is frankly dedicated to reliving the past strong enough to endure? Would it not be better to look to the future as well? Past friendships should be maintained I believe, but I think that they should be developed through constructive work and not by reliving the past alone. They have been strengthened and well formed in combat but they must continue to grow.

Perhaps another argument against these associations may be based on the fact that they represent relatively small groups in our present day army as well as among our veterans. The veterans who served in separate tank battalions, in mechanized cavalry units, in the Armored Replacement Center, Armored School, and Tank Destroyer units are just as loyal to their old outfits even though their units may be too small to organize.

One other problem which I and many others will encounter is that of which association to join. For example, I was with the Fourth Armored for 15 months from its activation. I have strong attachments there and friends that I would like to see again. I have already mentioned my tour with the Third in combat, but I was also with the Tenth for a long enough period to be interested in its war activities and honors. Now which division association should I join? All three?

I believe that the solution that I wish to propose is the most satisfactory one. We already have in being an Armored Cavalry Association which publishes a fine journal with service-wide distribution. Why can't the division associations voluntarily disband and invite their members to join this association? Why can't the activities of this association be expanded to include a

convention where we may all meet together and relive the old days as well as to work for the future of armor?

There appear to be many advantages to this solution. We would have an excellent JOURNAL in which a section could keep us posted on the activities of members of our old divisions. We would have the opportunity for good fellowship and yet we could keep posted on the present activities and future developments of armor. The organization could include everybody interested in armor and would be open to no charges of favoritism.

The organization would be a living organization which would be of aid to our army. Our JOURNAL is a fine one but it could be improved by directing the energies of all the fine division organizations through one channel. Our armored tactics, organization, and matériel cannot remain static. We can't hope to progress simply through rehashing past campaigns. New ideas must be expressed, discussed and pondered.

Recently I attended one meeting of the Air Force Association Convention in Columbus, Ohio where I am now stationed. Representatives from state groups all over the nation were present. Men of each air force registered on arrival with their old outfit and saw their old friends again. Old friendships were revived, and happy fraternization prevailed, yet the *entire* wartime Air Force was represented. The members were reliving the past, but they were also interested in the future of the Air Force. I think that this meeting clearly demonstrated the practicability of my idea.

I feel that there is still another advantage to a strong Armored Cavalry Association. At the present time I am on ROTC duty with the mission of training men for Reserve commissions in the Armored Cavalry. Naturally, we are all interested in having the very best Reserve officers in our branch, but we are losing ground to the Air Forces and the Services in the competition for the best men.

Now nobody knows better than an Armored man the strong need for cooperation between the branches, but in honest, straightforward competition for the best men shouldn't we exhibit the same drive as the others? The branches that still have chiefs to represent them are forging ahead at this time. The Engineer instructor periodically receives displays advertising his branch, *selling* it to prospective Advanced ROTC students. The Ordnance does the same. The Transportation Corps and Air Forces aid their instructors in many ways. Shouldn't the Armored Cavalry ROTC, National Guard, and Officer Reserve Corps instructors receive the same type of aid from some central source? What source would be better than the Armored Cavalry Association?

I know that there must be many arguments against these ideas, and I would like to hear them. For one thing, I think that many division associations would be afraid that they would be swallowed up by such a large organization and that there would not be the same appeal for men to join an over-all Armored Association as to join their old outfit's organization. I think that organizing our meetings in the manner of the Air Force Association would take care of this difficulty as well as assuring more permanency to it.

Another argument that might be raised is that the Armored Cavalry is only one branch but there are many branches represented in a division association. I feel that the common interest in Armor would hold us all together, and that renaming the association as the Armored Association would accomplish this purpose adequately.

What do you think of the idea of dissolving the division associations and strengthening the Armored Cavalry or Armored Association? Would it work? Should the present Armored Division Associations pass resolutions joining them to the Armored Association or dissolving entirely and inviting their members to join it?

BOOKS ON ARMORED DIVISIONS IN COMBAT

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WE HAVE THEM

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THE ARMORED CAVALRY JOURNAL

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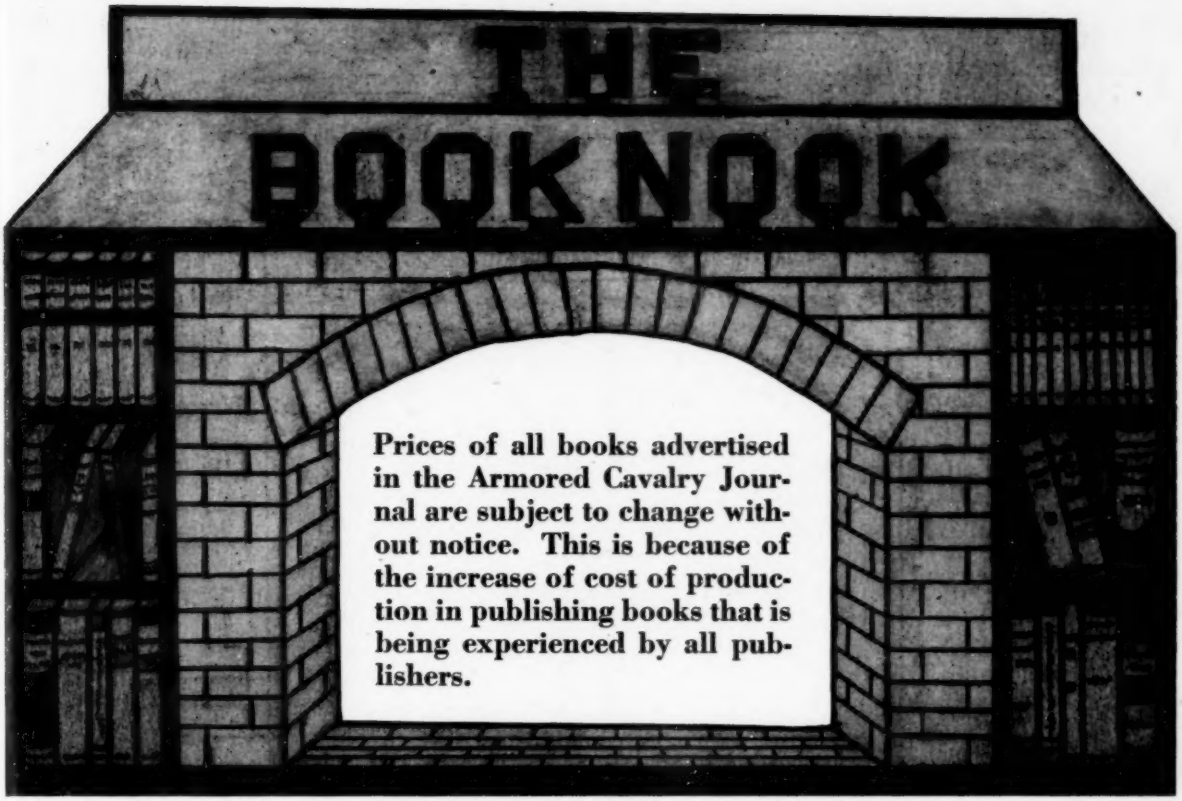
THE
BOOK NOOK
Prices of all books advertised in the Armored Cavalry Journal are subject to change without notice. This is because of the increase of cost of production in publishing books that is being experienced by all publishers.

AIRBORNE WARFARE. By Major General James M. Gavin. Infantry Journal Press. $3.00.

General James M. Gavin was one of our top Allied Airborne Commanders in the late war. Militarily well grounded he entered this field of new combat technique in its creative period. The combination of a young officer in a young scheme was a good one. Developing with the advance in airborne training, General Gavin contributed substantially to the architectural structure.

Writing from his background as a participating commander, an observer and a student of airborne operations, General Gavin gives in sequence an objective report of all such operations in World War II. There is a strong impact upon the reader in keeping pace with the lightning evolution of a new phase of modern warfare. Starting from a tentative training state, each successive operation in combat marks a tremendous stride into experience and effectiveness.

One of the real values of this book lies in its full balance. It is auspicious in authorship. It covers the formative period of airborne warfare. The actual combat operations are molded from their inspiration on through high level planning, preparation, operation, value, results, mistakes and lessons learned.

General Gavin doesn't stop with the Corregidor jump. He gives a full evaluation of the past and present, and reads the results into the future in a provocative manner, a manner which must challenge military and civilian thought. This we need.

Certain aspects are perhaps hastily covered and glancingly treated. There is an artful dismissal of mistakes and adverse percentages; careful analysis is devoted to the plus side of things. There will be substantial issue taken with remarks on armored equipment. However, this is a book for all to read and analyze. Here is a material segment of modern warfare that demands our attention. Looking to the future, we must meet and act upon it with a vigor commensurate with the proper acquittal of our responsibilities to our country and its position of world leadership.

W. G. B.

* * *

THE 1ST CAVALRY DIVISION IN WORLD WAR II. Compiled by Major B. C. Wright. Published in Japan. Distributed in the United States by the ARMORED CAVALRY JOURNAL. $3.00. (Paper bound.)

First into the Philippines, first into Manila, and first into Tokyo are just three of the accomplishments of the 1st Cavalry Division. These events and hundreds more that made the 1st Cavalry Division one of the outstanding American divisions in World War II are recorded in the pages of this top-notch military history.

The 1st Cavalry Division in World War II contains story after story of heroism and sacrifice. It is not a book of tactics and strategy, but rather a running story of the actions of individuals.

Chapter One tells the history of the Division from Indian Fighting to New Guinea. Then the Admiralty, Leyte-Samar, and Luzon campaigns are covered in a chapter each. Artillery Combat Operations and the Occupation of Japan are covered in other chapters. All in all the history is thoroughly complete.

In his Foreword to the book, the author writes, "This is the account of the 1st Cavalry Division's activities in World War II. It has been prepared in an effort to pay a measure of tribute to those brave heroes, living and dead, who gave so much of themselves and their abilities in order that The First Team might be First."

AIRBORNE WARFARE

BY

MAJOR GENERAL

JAMES M. GAVIN

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Armored Cavalry Journal

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The history has pictures of every important event the Division took part in.

General of the Army Douglas MacArthur writes of the Division, "No greater record has emerged from the War than that of the 1st Cavalry Division—swift and sure in attack, tenacious and durable in defense, and loyal and cheerful under hardship. It has written its own noble history. My personal connection with it in many moments of crisis has especially endeared it to me."

Other tributes are paid the Division by General Walter Kreuger, and Lieutenant General Robert Eichelberger, Army commanders under which the Division served.

One of the greatest achievements of the 1st Cavalry Division was its liberation of the Santo Tomas Internment Camp in Manila where some 3700 Allied civilians had been held prisoners by the Japs for over three years. This, which occurred on February 3, 1945, is splendidly covered in the history. It will revive the memories of many present and former members of the 1st Cavalry Division.

For the combat members of the Division who returned home before the 1st Cavalry Division departed for Japan, the chapter entitled "First in Tokyo—The Occupation of Japan" will be of intense interest. It covers the high points of the Division's occupational activities.

And now, as a permanent record of the Division's many accomplishments, we have *The 1st Cavalry Division in World War II.*

This book is worthy of being read by every American.

H. D. S.

* * *

SILVER WINGS. By Edwin L. Wilber and Estelle R. Schoenholtz. Appleton-Century. $2.50.

In *Silver Wings* we have a new angle in military books. This is an Air Force story directed to the youngsters of America—human interest narratives of air heroes in the late war. The Milton Caniff drawings and the action type of incidents give it almost a Sunday "Funnies" flavor; however, background is rich in fact and the treatment is appropriate to the book's purpose.

Royalties from the sale of this book will go to the Army Air Forces Aid Society. There is a foreword by General Hap Arnold, and the writing scheme by which the stories are introduced lends a thread of contact and a background continuity to the presentation of the various wartime incidents, thus holding the interest nicely. The purpose of the book is well served.

W. G. B.

* * *

BACK HOME. By Bill Mauldin. William Sloane Associates. $3.50.

This is a strange book. There will be varied reaction among its readers. The whole range of opinion will be provoked. An odd combination of feelings prods the reader. Intermixed are idealism, immaturity, humor, excuse and a lot more. There is a shadow impression of ghost writing. Anyone with a chip on the shoulder about anything will find a response here.

The close of the book brings almost a sigh of relief and a vague agreement with the author that it's good to get this book off the chest; maturity has come.

Bill Mauldin's cartoons are consistently fine. If only they could have appeared unadorned by explanation!

W. G. B.

CONQUER: The History of the Ninth Army. Infantry Journal Press. $4.50.

This is one of the better organization histories to come out of the Second World War. Here is dignity and objectivity, unadorned by bombast, idealistic ranting or, to use the current idiom, corn.

There is a truly fine picture of General William H. Simpson, the Ninth's Commander, fronting the story. Under his signature the facing page carries a message—not the familiar high-flown tripe, but a message with a character of simplicity and dignity which leaves no doubt as to its sincerity.

Preparation of this history was no off-the-elbow scheme, but a well planned project auguring success from the start. A committee of senior officers was set up to do the job properly, and properly the job was done.

For the record, several pages only are given over to the formative period of Ninth Army. The scene then shifts to the Brittany Peninsula and things get under way with a plunge into the siege of Brest. The full story of the Ninth then unfolds, with care given to all aspects of the operation of an Army under the pressure of war. The push to the Roer, Rhine and Elbe is covered in detail, and with VE Day, the transition to occupation and military government. Usual appendices carry the load of statistics, and the book is topped out by a section of photographs more harmonious than many we've seen to date.

This book will provide interest well beyond membership in Ninth Army. W. G. B.

* * *

THE 409TH INFANTRY IN WORLD WAR II. By Sergeant William East and Private William F. Gleason. Infantry Journal Press. $5.00.

This is a history of one of the regiments of the 103rd Cactus Division, with the value of authorship from the enlisted ranks. The familiar pattern is followed with peak interest to be found in the combat experiences in the Rhineland and in Central Europe. Fadeout comes in Austria. There is strong interest here for Cactus Division members. W. G. B.

* * *

FLYING MINUTE MEN. By Robert E. Neprud. Duell, Sloan and Pearce. $3.00.

When Pearl Harbor shocked us awake and plunged us into a war, we were unprepared. One piece of the patchwork quilt woven to meet the emergency was the organization of the non-military, non-commercial flyers of small planes across the country into a group capable of meeting certain phases of the emergency. *Flying Minute Men* is the story of these flying enthusiasts in their great contribution to carrying us through a ticklish period. Their work in coast defense, anti-submarine patrol, air-sea rescue, ground search, border patrol and other activities was outstanding.

Other than good storytelling, this book fills a more basic need of our nation today. It brings into focus the relation of each citizen of this country to its national defense; the individual responsibility of each person for support of that program of defense; the immediate involvement of the individual in the defense of the country in time of emergency; and the burden of guilt for insufficient defense.

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Civil Air Patrol members were one segment only of our civil potential made operative through emergency. They prove the value of our American initiative. They did a fine job, and there is no reason to believe that they and similar fields of activity will not be arbitrarily embroiled by possible exigencies of the future.

Members of the Armed Forces will appreciate the part played by Civil Air Patrol in the late war. Civilian readers will benefit through increased consciousness. W. G. B.

* * *

PSYCHOLOGICAL WARFARE. By Paul M. A. Linebarger. Infantry Journal Press. $3.50.

To most of us propaganda has a Hitlerian connotation and psychological warfare is some vague thing connected with the late war. We fall short of a follow-through that would tag American advertising as the most professional propaganda in the world, from which Goebbels drew many of his ideas. We haven't enough consciousness to bring appreciation of psychological warfare out of the technical aura and into the general light.

The material phases of the art are somewhat familiar. Members of the Armed Forces recall mobile sound units and Axis Sally broadcasts. This reviewer recalls leading a recon patrol into Jerryland in Italy's North Apennines, and, while crawling on hands and knees through a ticklish spot, of hearing a faint rattle of paper under a carefully placed hand; later inspection at the CP produced a copy of *Frontpost*, propaganda leaflet from the Yanks to the Krauts informing them of the failure of the Ardennes Offensive.

Major Linebarger's book is technical and historical, but is also interesting reading on an interesting subject. In this day when psychological warfare goes on between two great ideologies it is remunerative reading. Based upon the consciousness, technical ability, methods and effectiveness of the subject which the book indicates we possess, it is hoped that we will carry on in the van. We should not let our inherent sense of decency retard our development in the slyer aspects of a necessary medium, neither should we allow ourselves to be out-advertised in the more aboveboard end of the game. W. G. B.

* * *

REVOLUTION IN WARFARE. By B. H. Liddell Hart. Yale University Press. $2.00.

This latest book by Captain Liddell Hart, Britain's leading writer on military affairs, emphasizes the importance of science and scientists in any future wars. He states, "In the future, the quality of a handful of scientists may weigh more heavily than any conscript mass of infantry, reducing to absurdity the quantitative value of human numbers, while nullifying both the appeal and the power of 'militarism.' "

As for military education to cope with the present "scientific age," Captain Hart writes, "Military education hitherto has not been designed to reach a scientific approach to problems, but rather to develop executive skill and foster the spirit of loyalty. That system has made much progress in the production of commanders and of staff officers. But to tackle the defense problems of the future the greatest of our needs is to produce 'military scientists'

for the higher planning."

The book as a whole describes the development of modern warfare in terms of the tools of war, from the growth of firepower in the Napoleonic wars to the evolution of the tank.

Of conscription, Captain Hart says, "Conscription—that much favored panacea for national security—will not meet the problem. In a war where atomic bombing was unleashed, a large conscript army would merely represent a large amount of wasted effort. In the case where atomic bombing was held in suspense, a conscript army that only became available after mobilization would hardly be effective to check the kind of camouflaged penetration or surprise invasion that aggressors may still attempt."

Revolution in Warfare is an excellent book. Every reader may not agree with Captain Hart's ideas and theories, but they will give him something to think about.

H. D. S.

* * *

HISTORY OF THE 363RD INFANTRY REGIMENT. By Captain Ralph E. Strootman. Infantry Journal Press. $5.00.

The publication of a regimental history is an ambitious project. Few histories have been published on units below divisional level, for obvious reasons. This is unfortunate, for in the smaller unit there is available a personalization proportionately missing in a larger unit. In regiment and battalion attention can center upon the individual soldier and his individual enemy. Thus a story of real value to the military and civilian reader.

Captain Strootman has done an excellent job on this history of the 363rd Regiment of the 91st Pine Tree Division. The story is well documented, and is gifted by the technical publication excellence of the Infantry Journal Press. It is unfortunate that reading of unit histories is so limited to the small public of unit membership. They might well be more widely read. There is some good background here on the Italian Campaign.

W. G. B.

* * *

THE 90TH: A History of the 90th Infantry Division in World War II. By Lieutenants Joe I. Abrams and William P. Flynn, Jr. Army and Navy Publishing Company. $5.00.

The men of the 90th Division deserve a better history than this one. Perhaps there are a number of reasons for a thoroughly poor job. The writing is not good. The tone throughout has a "we won the war" temper carrying the impression that a single division landed at Normandy to knife across the Continent, slice the German Forces in two, and bring victory. The trite style has a Texian flavor that must bring a flush to the ears of many TO men. The cover of the book is a beautiful leather elaborately done—so elaborate, in fact, that it has no dignity. Paper stock is poor, and the number of mistakes throughout indicate a lack of proofreading; there are five on the first page. The composition work is low quality. In deference to good intention, sacrifice, and effort expended, to whatever extent, the fault probably can be charged to editorial inexperience. It is difficult to extend that grace to the printer.

W. G. B.

BOOKS FOR LEADERS OF MEN

SEXUAL BEHAVIOR IN THE HUMAN MALE

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Place Advance Orders Now

Lieutenant Colonel Hal D. Steward, former Associate Editor of the ARMORED CAVALRY JOURNAL, has written this history from official Department of the Army records. Colonel Steward was retained especially by the 11th Armored Division Association to write and edit the history. Special chapters by Brigadier General Charles S. Kilburn and Colonel Hill Blalock are also included in the book.

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Set forth in clear and simple language, this book contains the Principles of Equitation as explained by an international expert on horsemanship and horsemastership. It tells the reader how to become a better horseman and how to obtain better results from man and horse. Throughout the book are practical and valuable hints on horsemastership. There are chapters on *Seat, Application of the Aids, Saddlery, Schooling,* and *Jumping.*

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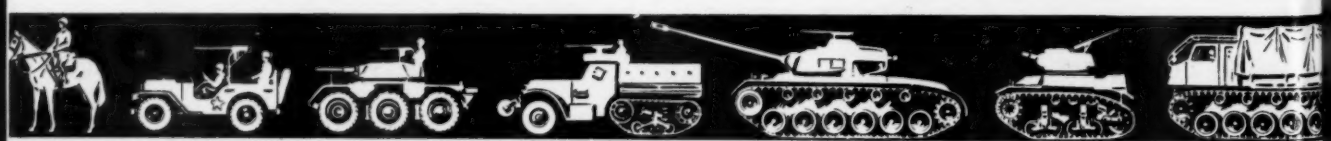
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